CONGRESSIONAL OVERSIGHT PANEL

AUGUST OVERSIGHT REPORT *

THE GLOBAL CONTEXT AND INTERNATIONAL EFFECTS OF THE TARP

AUGUST 12, 2010.—Ordered to be printed

* Submitted under Section 125(b)(1) of Title 1 of the Emergency Economic Stabilization Act of 2008, Pub. L. No. 110–343

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CONTENTS

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EXECUTIVE SUMMARY

to funding in dollar-denominated markets. When short-term lenders began to question the ability of banks to repay their obligations, markets froze, and the international financial system verged on chaos.

Faced with the possible collapse of their most important financial institutions, many national governments intervened. One of the main components of the U.S. response was the $700 billion Troubled Assets Relief Program (TARP), which pumped capital into financial institutions, guaranteed billions of dollars in debt and troubled assets, and directly purchased assets. The U.S. Treasury and Federal Reserve offered further support by allowing banks to borrow cheaply from the government and by guaranteeing selected pools of assets. Other nations' interventions used the same basic set of policy tools, but with a key difference: While the United States attempted to stabilize the system by flooding money into as many banks as possible—including those that had significant overseas operations—most other nations targeted their efforts more narrowly toward institutions that in many cases had no major U.S. operations. As a result, it appears likely that America's financial rescue had a much greater impact internationally than other nations' programs had on the United States. This outcome was likely inevitable given the structure of the TARP, but if the U.S. government had gathered more information about which countries' institutions would most benefit from some of its actions, it might have been able to ask those countries to share the pain of rescue. For example, banks in France and Germany were among the greatest beneficiaries of AIG's rescue, yet the U.S. government bore the entire $70 billion risk of the AIG capital injection program. The U.S. share of this single rescue exceeded the size of France's entire $35 billion capital injection program and was nearly half the size of Germany's $133 billion program.

Even at this late date, it is difficult to assess the precise international impact of the TARP or other U.S. rescue programs because Treasury gathered very little data on how TARP funds flowed overseas. As a result, neither students of the current crisis nor those dealing with future rescue efforts will have access to much of the information that would help them make well-informed decisions. In the interests of transparency and completeness, and to help inform regulators' actions in a world that is likely to become ever more financially integrated, the Panel strongly urges Treasury to start now to report more data about how TARP and other rescue funds flowed internationally and to document the impact that the U.S. rescue had overseas. Going forward, Treasury should create and maintain a database of this information and should urge foreign regulators and multinational organizations to collect and report similar data.

The crisis also underscored the fact that the international community's formal mechanisms to resolve potential financial crises are very limited. Even though the TARP legislation required Treasury to coordinate its programs with similar efforts by foreign governments, the global response to the financial crisis unfolded on an ad hoc, informal, country-by-country basis. Each individual government made its own decisions based on its evaluation of what was best for its own banking sector and for its own domestic economy. Even on the occasions when several governments worked together

to rescue specific ailing institutions, as in the rescues of European banks Dexia and Fortis, national interests often came to the fore. These ad hoc actions ultimately restored a measure of stability to the international system, but they underscored the fact that the internationalization of the financial system has outpaced the ability of national regulators to respond to global crises.

In particular, the crisis revealed the need for an international plan to handle the collapse of major, globally significant financial institutions. A cross-border resolution regime could establish rules that would permit the orderly resolution of large international institutions, while also encouraging contingency planning and the development of resolution and recovery plans. Such a regime could help to avoid the chaos that followed the Lehman bankruptcy, in which foreign claimants struggled to secure priority in the bankruptcy process, and the struggles that preceded the AIG rescue, in which the uncertain effect of bankruptcy on international contracts put the U.S. government under enormous pressure to support the company. Additionally, the development of international regulatory regimes could help to discourage regulatory arbitrage, instead encouraging individual countries to compete in a "race to the top" by adopting more effective regimes at the national level. Such regimes would also provide a plan of action in the event that a financial crisis hit an internationally significant institution in a country that was too small to bear the cost of a bailout. In the most recent crisis, the Netherlands' rescue efforts totaled 39 percent of its GDP, and Spain's totaled 24 percent, raising the specter that a future crisis could swamp the ability of smaller nations with large banking sectors to respond in absence of an international regime.

Moving forward, it is essential for the international community to gather information about the international financial system, to identify vulnerabilities, and to plan for emergency responses to a range of potential crises. The Panel recommends that U.S. regulators encourage regular crisis planning and "war gaming" for the international financial system. This recommendation complements the Panel's repeated recommendations that Treasury should engage in greater crisis planning and stress testing for domestic banks.

Financial crises have occurred many times in the past and will undoubtedly occur again in the future. Failure to plan ahead will only undermine efforts to safeguard the financial system. Careful policymakers would put plans in place before the next crisis, rather than responding on an ad hoc basis at the peak of the storm.

SECTION ONE:

A. Overview

The financial crisis that began in 2007 threw into relief two interesting facts about the international financial system. The first is well-known: the international financial system is integrated to the extent that in normal circumstances a bank's national origin is irrelevant to the people doing business with it. One of the consequences of some aspects of international integration, as discussed below, is that a crisis in one part of the system rapidly spreads across national boundaries. When such a crisis occurs, though, another fact becomes clear: in a crisis, a bank's national origin matters very much indeed.

Although most countries followed one or more of the same general approaches described in this report, and although the governments affected by the crisis did coordinate effectively, responses to the crisis have tended to be ad hoc and country-specific. Thus, although many institutions operate across national borders and are sometimes not identified with their home countries, at the time of crisis their national origins became more evident, and global expectations are that institutions will be the responsibility of their home countries.

This report examines the international aspects of the rescue of the financial system. In the United States, the Troubled Asset Relief Program (TARP) formed a large part of a coordinated government effort by various U.S. government agencies including the Federal Reserve Board, the FDIC, and Treasury. The report focuses on:

- To what extent the TARP and related efforts in the United States had international implications; and
- To what extent the programs instituted by other countries had repercussions in the United States or on U.S. institutions.

The report also examines the degree to which the TARP and related U.S. financial rescue efforts were coordinated with foreign governments and central banks. Section 112 of the Emergency Economic Stabilization Act of 2008 (EESA)[1] requires the Secretary of the Treasury to coordinate with the financial authorities and central banks of foreign governments to establish TARP-like programs in other countries and permits the Secretary to purchase troubled assets held by foreign financial authorities or banks. The Panel has not previously analyzed Treasury's performance, and the related performance of the Federal Reserve Board in this area, but the topic is clearly part of the Panel's mandate. It implicates the use of the Secretary's authority under EESA, the impact of Treasury's actions on the financial markets, the TARP's costs and benefits for the taxpayer, and transparency on the part of Treasury.

The report builds on the Panel's previous work, including its April 2009 report assessing Treasury's TARP strategy in light of historical approaches and the crisis and responses to the crisis in Europe.[2]

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[1] 12 U.S.C. § 5222.

[2] Congressional Oversight Panel, *April Oversight Report: Assessing Treasury's Strategy: Six Months of TARP* (Apr. 7, 2009) (online at cop.senate.gov/documents/cop-040709-report.pdf) (hereinafter "April Oversight Report").

B. Financial Integration and the Crisis

1. Globalization Prior to the Crisis

The increasing interconnectedness of capital markets, the significant U.S. operations of foreign firms, and the rising predominance of large, global U.S.-based institutions would eventually help elevate the crisis that began in 2007 from one involving problematic subprime asset exposures at select institutions to one that provoked broader, systemic market fears of a financial and economic collapse. The pre-crisis organization of the international financial system was the path through which contagion spread; it also provided the veins into which rescue funds could be injected. This system was sprawling and not easily cordoned off by country.

Numerous factors contributed to financial globalization over the past decade: increased liberalization of home country regulations, the appeal of geographic risk diversification, a growing stable of core multinational corporate clients, and rapidly developing capital markets in attractive, higher growth, emerging market economies.[3]

The U.S. banking sector is influenced by foreign markets in many ways, including: direct equity exposure to foreign investors, loans to foreign entities, deposits and other funding from overseas investors (including the interbank lending market), and credit risk transfer instruments (such as credit default swaps or CDSs) and other customized over-the-counter (OTC) contracts written on assets located in another country or entered into with a foreign counterparty. Other forms of integration are more regulatory in nature, such as increased uniformity in accounting and regulatory capital requirements.[4] Markets and regulators also depend on internationally recognized credit rating agencies for verification of creditworthiness. Finally, sovereign debt allows governments to raise funds, exposing investors (including banks) to interest rate, currency, fiscal and political risks in various regions.[5]

The rising interconnectedness of global financial institutions and, ultimately, economies, is illustrated by a growing correlation between equity market returns in the United States and those in the rest of the world, particularly over the past decade (as shown in Figure 1 below). This trend may indicate that geographic diversification is a less effective risk management tool than it was in the past.

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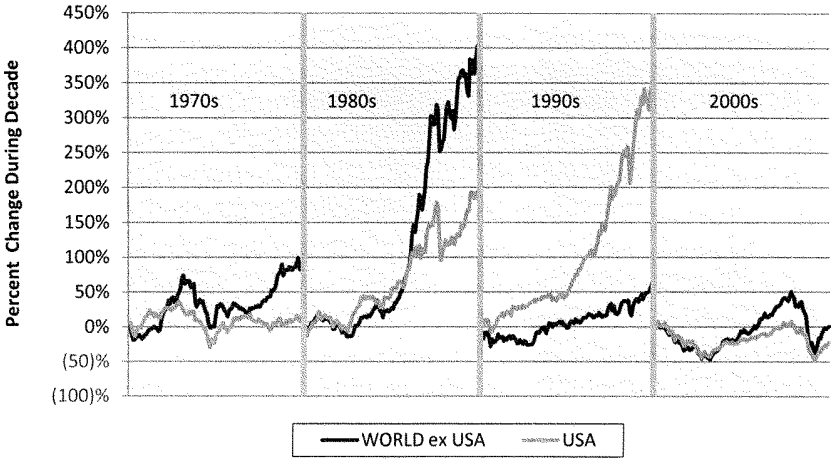
[3] International Accounting Standards Board, *Who We Are and What We Do* (July 2010) (online at www.iasb.org/NR/rdonlyres/F9EC8205-E883-4A53-9972-AD95BD28E0B5/0/WhoWeAreJULY2010.pdf) (hereinafter "IASB Background"); Bank for International Settlements, *The BIS in Profile* (June 2010) (online at www.bis.org/about/profile.pdf).

[4] IASB Background, *supra* note 3.

[5] Peter B. Kenen, *The Benefits and Risks of Financial Globalization,* Cato Journal, Vol. 27, No. 2, at 181–183 (Spring/Summer 2007) (online at www.cfr.org/content/publications/attachments/kenen.pdf); Matti Keloharju and Mervi Niskanen, *Why Do Firms Raise Foreign Currency Denominated Debt? Evidence from Finland,* European Financial Management, Vol. 7, No. 4 (Dec. 2001).

FIGURE 1: CORRELATION OF EQUITY MARKET RETURNS, UNITED STATES VS. REST OF THE WORLD (BY DECADE, 1970s–2000s) [6]



The proportion of U.S. banking assets housed within globally oriented institutions has grown steadily over the years. U.S. banks with significant foreign operations rose from just over 50 percent of total U.S. bank assets in the early 1990s to nearly 70 percent on the eve of the financial crisis[7] at which time the five largest U.S. firms (all global in nature), accounted for approximately 36 percent of total bank assets.[8]

[6] MSCI Indices. These figures represent the percent change in the market index as compared to the first stated equity value of each decade. Michael Ehrmann, Marcel Fratzscher, and Arnaud Mehl, *What Has Made the Financial Crisis Truly Global?* (May 24, 2009) (online at www.hkimr.org/view_attachment.asp?type=2&id=329).

[7] Nicola Cetorelli and Linda S. Goldberg, *Banking Globalization and Monetary Transmission,* Bank for International Settlements CGFS Paper, No. 40, at 92 (June 2008) (online at www.bis.org/publ/cgfs40.pdf) (hereinafter "Banking Globalization and Monetary Transmission").

[8] *See* Federal Deposit Insurance Corporation, *FDIC Institution Directory* (online at www2.fdic.gov/idasp/index.asp) (accessed Aug. 10, 2010); Federal Deposit Insurance Corporation, *FDIC Statistics on Banking* (online at www2.fdic.gov/SDI/SOB) (accessed Aug. 10, 2010). U.S. banks with over $100 billion in total assets in 2006 accounted for 49.8 percent of total bank assets. According to the FDIC, 14 institutions controlled $5.91 trillion of the $11.86 trillion in total bank assets in 2006. For concentration data on the European market, *see* European Commission, *European Financial Integration Report 2007,* at 64 (online at ec.europa.eu/internal_market/finances/docs/cross-sector/fin-integration/efir_report_2007_en.pdf).

FIGURE 2: SHARE OF TOTAL U.S. BANK ASSETS IN GLOBALLY ORIENTED U.S. BANKS [9]

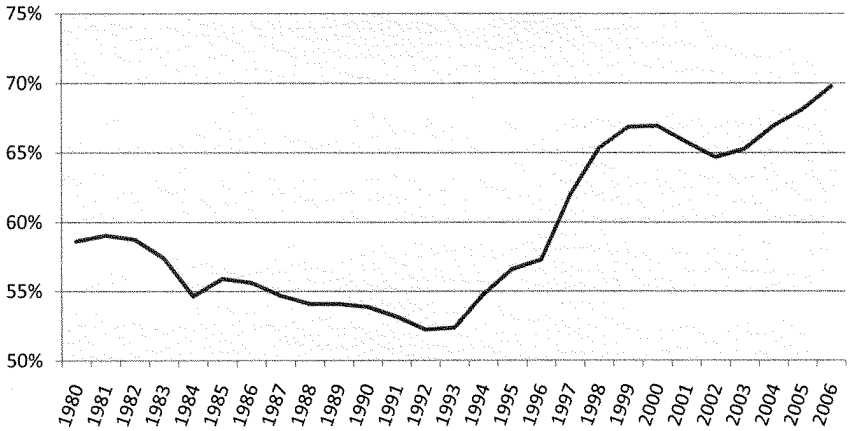


Figure 3 below outlines international contributions to revenue at the leading U.S. and international banks in 2005 and 2006. On the eve of the crisis in 2006, eight of the largest global banking institutions headquartered in the United States generated $110 billion in net revenue from non-U.S. operations, accounting for 28 percent of these banks' total net revenues. For many of the larger, more systemically important institutions, though, overseas operations were even more significant. For example, overseas revenue contributions for The Goldman Sachs Group, Inc. (Goldman Sachs) (46 percent), Citigroup Inc. (Citigroup) (44 percent), Lehman Brothers Holdings Inc. (Lehman) (37 percent), Merrill Lynch (36 percent), and Morgan Stanley (37 percent) were materially higher. (These figures exclude non-bank entities such as hedge funds and insurance companies. Insurer American International Group (AIG) generated approximately half of its 2004 to 2006 net revenue from overseas operations).[10]

A similar sample of eight leading European and Canadian banks shows that $67 billion, or approximately 34 percent of aggregate net revenue, came from the United States or all of North America, but outside their home market, in 2006. As with the U.S. banks, contributions from global, systemically important capital markets institutions were generally higher, led by Credit Suisse Group AG (Credit Suisse) (37 percent), HSBC Holdings plc (HSBC) (33 percent), UBS AG (UBS) (32 percent), and Deutsche Bank AG (Deutsche Bank) (28 percent). Across the U.S. securities industry, foreign-owned broker/dealers account for nearly one-third of U.S. securities revenue. Aggregate 2006 revenue data for the over 5,000 U.S.-operated broker/dealers reveal that 29 percent of this U.S. revenue is reported by foreign-owned broker/dealer subsidiaries in the

[9] Banking Globalization and Monetary Transmission, *supra* note 7, at 84.

[10] *See* Congressional Oversight Panel, *June Oversight Report: The AIG Rescue, Its Impact on Markets, and the Government's Exit Strategy,* at 20–21 (June 10, 2010) (online at cop.senate.gov/documents/cop-061010-report.pdf) (hereinafter "June Oversight Report").

U.S. (including Deutsche Bank, Credit Suisse, UBS, and many others), up from a 23 percent contribution in 2001.[11]

FIGURE 3: INTERNATIONAL NET REVENUE CONTRIBUTIONS, 2005–2006 [12]

U.S. Banks	Non-U.S. Revenue (billions of dollars)		Non-U.S. Revenue (Percentage of Total)	
	2005	2006	2005	2006
Bank of America	4.2	8.2	7.5	11.3
Bear Stearns	0.9	1.2	12.5	13.2
Citigroup	33.4	38.2	41.4	43.6
Goldman Sachs	10.6	17.3	42.0	45.9
JPMorgan Chase	11.5	16.1	21.4	26.2
Lehman Brothers	5.5	6.5	36.6	36.8
Merrill Lynch	8.5	12.0	33.7	35.5
Morgan Stanley	8.2	11.0	34.7	37.0
Total	**82.7**	**110.5**	**25.1**	**28.4**

Non-U.S. banks	U.S./North America Revenue (billions of dollars)		U.S./North America Revenue (Percentage of total)	
	2005	2006	2005	2006
CIBC	1.4	1.3	14.0	12.6
Credit Suisse	9.5	10.1	38.6	36.8
Deutsche Bank	7.2	10.5	24.1	27.7
HSBC	21.6	23.6	34.5	33.0
Royal Bank of Canada	3.8	4.0	23.8	21.8
Société Générale	3.3	3.5	13.8	12.3
TD Bank	2.2	2.3	21.9	19.4
UBS	12.3	12.2	37.2	32.2
Total	**61.2**	**67.3**	**36.1**	**34.1**

[12] Bloomberg data and company filings. Net Revenue for Deutsche Bank converted from Euros to USD based on average FX rates in 2005 and 2006, respectively. Firms that list net revenue specifically from the United States: Canadian Imperial Bank of Commerce (CIBC), Royal Bank of Canada, The Toronto-Dominion Bank (TD Bank), and UBS. Firms that list net revenue solely from North America: Credit Suisse, Deutsche Bank, HSBC, and Société Générale.

U.S. investment banks have long held a commanding position in European and Asian financial markets, and played a leading role in modernizing the equity markets in both regions, along with developing a more liquid debt market. The 2006 league table data (which measure investment bank performance) underscore the commanding market foothold of the top U.S. investment banks—Goldman Sachs, Morgan Stanley, Bank of America/Merrill Lynch, Citigroup and JPMorgan Chase & Co. (JPMorgan Chase). These firms accounted for five of the top eight league table slots in equity capital markets fees and all of the top-five positions in announced mergers and acquisitions volume in the region.[13] In comparison, the leading European banks penetrated the U.S. market to a lesser

[11] Financial Industry Regulatory Authority (FINRA) statistics in response to Panel data request. 458 of the 5,223 FINRA-member broker/dealers in operation for all four quarters of 2006 cited a foreign country of origin or foreign ownership. In the aggregate, these firms reported $128.8 billion in 2006 revenue from their U.S. operations, 29.2 percent of the $441.6 billion in revenue reported by FINRA's entire membership base, including both U.S. and foreign-owned broker/dealers. This compares to $60.1 billion in revenue from foreign-owned broker/dealers and $259.9 billion in overall net revenue from both U.S. and non-U.S. owned broker/dealers in the U.S. market in 2001.

[13] Data provided by Dealogic.

extent by 2006, with their footprints in many cases supplemented via acquisitions.[14]

2. Globalization of the Crisis

The conventional wisdom in the pre-crisis years suggested that banks that operate across global markets should be more stable, given their ability to rely on a collection of geographically dispersed businesses. But the degree of interlinkages within the financial system and the globalized nature of the housing downturn created a backdrop that magnified, rather than diluted, the risk to globally interconnected financial institutions. The most harmful interlinkages were manifested primarily in (a) exposure to the housing crisis, particularly via holdings of U.S. mortgage-backed securities, and (b) funding mechanisms that relied on the ability of financial institutions to access overnight inter-bank funding markets, particularly in dollar-denominated markets, in many cases to fund assets linked to U.S. housing securities.[15]

A recent study by the Board of Governors of the Federal Reserve System cites the following factors as helping to globalize the crisis:

- "a generalized run on global financial institutions, given lack of information as to who actually held toxic assets and how much;
- the dependence of many financial systems on short-term funding (both in dollars and in other currencies);
- a vicious cycle of mark-to-market losses driving fire sales of [asset-backed securities], which in turn triggered further losses;
- the realization that financial firms around the world were pursuing similar (flawed) business models and were subject to similar risks; and
- global swings in risk aversion supported by instantaneous worldwide communications and a shared business culture."[16]

Given that the U.S. subprime crisis—and the global housing market collapse more broadly—is generally acknowledged as ground zero for the financial crisis, a review of the mechanisms by which the residential mortgage crisis was transmitted to global financial institutions is perhaps illustrative. At its core, the increase in the securitization of mortgage loans broadened the exposure of the U.S. housing market collapse beyond the traditional relationship of borrowers and lenders, leading to what one study called a "lengthening of the intermediation chains that increased the complexity and interconnectedness of the financial system, increasing the potential for disruptions to spread swiftly across markets and borders."[17] Under this new framework, the old model of mortgage

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[14] Leading European banks gained a foothold in the U.S. market via an assortment of acquisitions: Credit Suisse acquired Donaldson, Lufkin & Jenrette in 2000 (after buying First Boston in 1988); Deutsche Bank purchased Bankers Trust in 1998 (which previously bought investment bank Alex Brown in 1997); and UBS purchased Paine Webber in 2000.

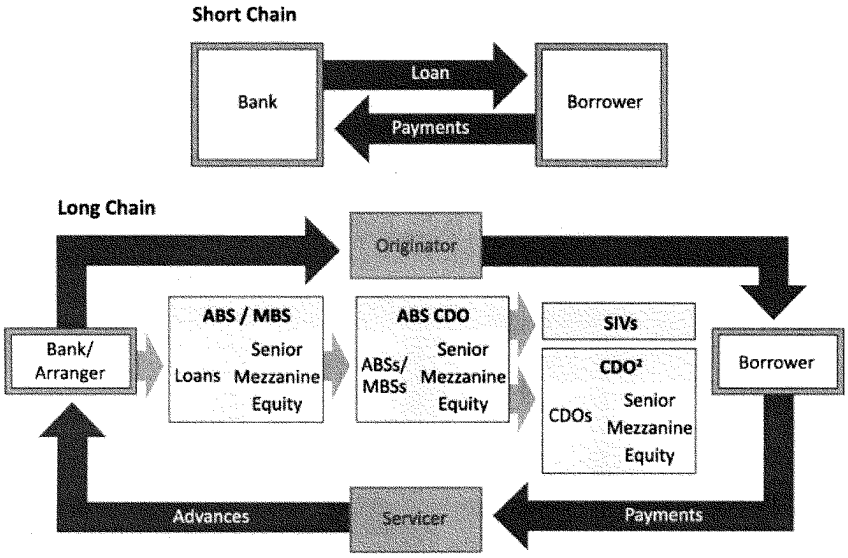
[15] Steven B. Kamin and Laurie Pounder DeMarco, *How Did a Domestic Housing Slump Turn into a Global Financial Crisis?,* Federal Reserve International Finance Discussion Papers, No. 994 (Jan. 2010) (online at www.federalreserve.gov/pubs/ifdp/2010/994/ifdp994.pdf) (hereinafter "How Did a Domestic Housing Slump Turn into a Global Financial Crisis?").

[16] *Id.* at 6.

[17] *See* International Monetary Fund, *Global Financial Stability Report: Navigating the Financial Challenges Ahead,* at 87 (Oct. 2009) (online at www.imf.org/External/Pubs/FT/GFSR/2009/02/pdf/text.pdf) (hereinafter "IMF Global Financial Stability Report").

lending, originating and holding loans on a bank's balance sheet, morphed into a new "originate to distribute" model. The economic incentives for the mortgage originator at the front-end of the transaction chain changed with the securitization and distribution of mortgage loans to investors. Because the loans' originators did not bear all the risk associated with the loans, they had less incentive to ensure the quality of the loan and the creditworthiness of the borrower.

FIGURE 4: SIMPLE BANK MORTGAGE LENDING EVOLVES INTO "RISK DIVERSIFICATION" (IMF ILLUSTRATION) [18]



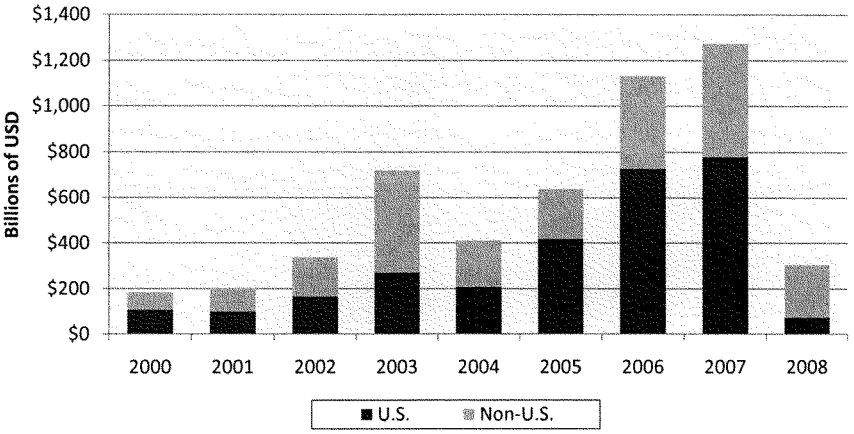
Problems in transparency as the transaction channel lengthened and product sophistication expanded reinforced the risks in the housing market. The manner in which these loans were repackaged into mortgage securities, tranches of which then served as reference entities for a host of other products—including collateralized debt obligations (CDOs) and CDO-squareds (as outlined below in Figure 5) [19]—not only widely dispersed the exposure to the U.S. mortgage market but also greatly magnified the underlying risk in the initial mortgage loans.[20] Further, the complexity and opacity of these products impeded the recognition of the risks they carried.

[18] Chart based on IMF publication. *See id.* at 93. Definitions of key terms: Asset-backed security (ABS); Collateralized debt obligation (CDO); Collateralized debt obligation-squared (CDO^2); Mortgage-backed security (MBS); Structured investment vehicle (SIV). "Senior," "Mezzanine," and "Equity" tranches represent different classes of liabilities. The most junior tranche is equity, followed by the mezzanine tranche, which are below more senior tranches. As the most junior in the capital structure, equity tranches are the first to absorb losses on underperforming portfolios.

[19] CDO and CDO^2 represent securities backed by ABS or MBS, or in the case of CDO^2, other CDOs.

[20] IMF Global Financial Stability Report, *supra* note 17, at 84–88. It should be noted that figures for non-U.S. issuance may be overstated due to the issuance of U.S. debt from non-U.S. jurisdictions (e.g., Cayman Islands). Carol C. Bertaut et al., *Understanding U.S. Cross-Border Securities Data,* Federal Reserve Bulletin (Feb 5. 2009) (online at www.federalreserve.gov/pubs/

FIGURE 5: CDO & CDO-SQUARED ISSUANCE, 2000–2008 [21]



As became abundantly clear, the increased sophistication of mortgage products—backstopped by supportive credit ratings—did not necessarily dilute the risk from a regional, or much less a global, housing crisis.[22] Rather, many banks continued to hold the troubled securities associated with these products, in addition to whole loans on similar collateral.[23]

Of course, securitization allowed non-U.S. institutions to gain exposure to the U.S. housing market via an assortment of investment vehicles. This was not necessarily a two-way street, as non-U.S. residential mortgage securities markets were comparatively less developed, and cross-border mortgage lending into these markets was limited.[24] Securitization issuance volumes by geography underscore the predominant role of the U.S. asset-backed securitization market. From 1999 to 2009, the United States accounted for 80 percent of global securitization volume, with the balance largely driven by Europe. As outlined in Section C.1.c below, a significant portion of these U.S. securities, and the CDOs that referenced them, ultimately wound up on the balance sheets of European in-

bulletin/2006/cross_border_securities.pdf) (hereinafter "Understanding U.S. Cross-Border Securities Data").

[21] Understanding U.S. Cross-Border Securities Data, *supra* note 20.

[22] "The magic of pooling and tranching was that, in the process, the risk distribution became more benign, while the underlying loans were riskier and riskier, thus providing sought-after higher returns." *See* Carmine Di Noia et al., *Keep It Simple: Policy Responses to the Financial Crisis,* Center for European Policy Studies Paper, at 21 (Mar. 24, 2009) (online at papers.ssrn.com/sol3/papers.cfm?abstract_id=1368164).

[23] *See* IMF Global Financial Stability Report, *supra* note 17, at 85.

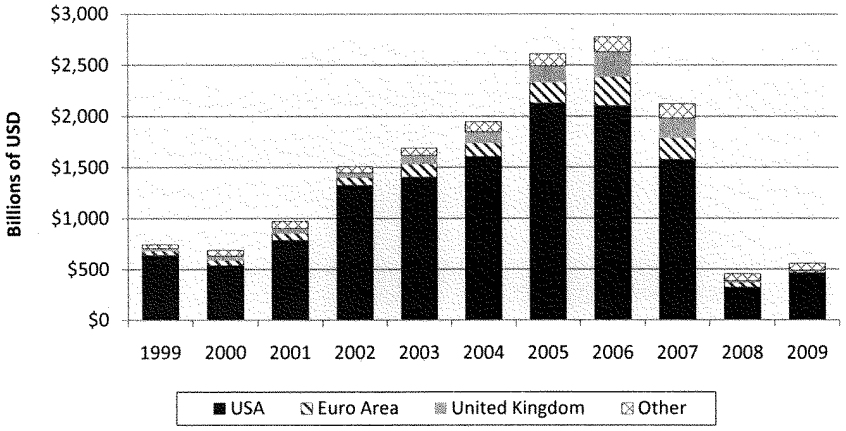
[24] *See* Franklin Allen, Michael K.F. Chui, and Angela Maddaloni, *Financial Systems in Europe, the USA, and Asia,* at 505–507, Oxford Review of Economic Policy (Nov. 4, 2004) (online at finance.wharton.upenn.edu/allenf/download/Vita/finsystemseurope.pdf) ("[T]he European market for mortgage-related products is very small. MBS issuance accounts for around 50 percent of the overall European securitization market, but still represents a small portion of all funding supply for mortgages. Despite significant growth rates in issuance recorded over recent years, the European market for MBS is liquid only in the UK and the Netherlands.").

In 2007, issuance of mortgage-related securities in Europe totaled EUR 307 billion, with more than EUR 246 billion of RMBS and CMBS issued in the United Kingdom, the Netherlands, and Spain. However, the amount of MBS issuance in Europe is just 21 percent of the total amount of agency and non-agency MBS issued in the United States in 2007, which was EUR 1,476 billion in the aggregate. European Securitization Forum, *ESF Securitisation Data Report: Q1 2008* (June 2008) (online at www.afme.eu/document.aspx?id=2878) (hereinafter "ESF Securitisation Data Report: Q1 2008").

stitutions, resulting in substantial write-downs during the 2007–2009 period.

FIGURE 6: SECURITIZATION ISSUANCE BY GEOGRAPHIC REGION, 1999–2009[25]

[*Billions of USD*]



At the end of 2007, $9.1 trillion in U.S. mortgage-related securities were outstanding. Of this amount, $2.4 trillion were non-agency residential mortgage-backed securities (RMBS), so-called private label securities as they lacked the guarantee of Fannie Mae or Freddie Mac, and $872 billion were commercial mortgage-backed securities (CMBS).[26] Of the outstanding non-agency RMBS, $1.5 trillion were subprime mortgage or Alt-A securities, which referenced loans to borrowers with lower credit scores or with respect to properties with a higher loan-to-value ratio, or were underwritten on the basis of more lax documentation standards than would be typical for prime borrowers.[27] The total U.S. non-agency housing market was 2.5 times the size of the European RMBS market (see Figure 7 below).

Residential securities exposures are outlined in the table below; regional loss tallies and specific financial institutions' losses are detailed in Figures 10 and 11, below.

[25] Asset-backed securities and mortgage-backed securities originating from each respective region, including public and private placements. The data does not incorporate U.S. agency securities. Data provided by Dealogic.

[26] Non-agency securities are private label securities (issued by banks, brokerages and other vehicles), and lack the support of agency-backed securities issued by the federal government housing agencies, Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Securities Industry and Financial Markets Association, *SIFMA Research and Statistics* (online at www.sifma.org/research/research.aspx?ID=10806) (accessed Aug. 10, 2010).

[27] Includes fixed and adjustable-rate mortgage (ARM) securities. Data provided by J.P. Morgan Research (MBS).

FIGURE 7: RESIDENTIAL MORTGAGE BACKED SECURITIES OUTSTANDING, 2007

[*Billions of USD*]

	U.S. Balance [28]
Agency MBS	4,188
Non-Agency MBS [29]	2,390
Prime	581
Alt-A	714
Option ARM	304
Subprime	790
Total	**6,578**
Europe [30]	977

[28] Data provided by J.P. Morgan Research (MBS).
[29] Includes fixed-rate and adjustable-rate mortgage (ARMs) securities.
[30] European balance converted from euro to dollar based on euro-dollar exchange rate at the end of the fourth quarter 2007. ESF Securitisation Data Report: QI 2008, *supra* note 24, at 5.

One offshoot of globalization, and of the increased importance and integration of emerging markets, was the higher profile of state-controlled investment arms, or Sovereign Wealth Funds (SWFs). SWFs were the first line of defense for many firms during the initial phase of the crisis: banks sought to plug holes in their balance sheets in late 2007 and early 2008, and SWFs were able to provide capital.[31] Even near the peak of the crisis in August 2008, a state-owned institution, Korea Development Bank (KDB), was seen as a potential buyer of Lehman Brothers. After the collapse of Lehman, there was significant speculation that China International Capital Corp (CICC), a Chinese government investment arm, would take a controlling stake in Morgan Stanley.[32]

3. Cross-Border Integration Within Financial Institutions

While overseas operations generally presented attractive returns to the parent companies of financial institutions, the structure of these cross-border operations grew increasingly complex in order to comply with the legal, regulatory, and tax requirements of each country in which the banks operated. Complex internal procedures ultimately permitted funds to flow freely across national boundaries even within a specific institution. In addition to operating across multiple jurisdictions, the operations of the holding companies and their subsidiaries grew increasingly intertwined. These structures would pose challenges when the system unraveled. As the International Monetary Fund (IMF) noted, "legal frameworks for facilitating cross-border finance in stable periods are typically

[31] Between November 2007 and January 2008, SWFs invested approximately $38 billion in Citigroup, Merrill Lynch, and Morgan Stanley. Citigroup was the major recipient of these capital injections, receiving $7.5 billion from the Abu Dhabi Investment Authority in November 2007 and $12.5 billion from a group of investors including the Government of Singapore Investment Corp. and the Kuwait Investment Authority in January 2008. Merrill Lynch received $5 billion in capital from Singapore's Temasek Holdings in December 2007 and $6.6 billion from a group of investors including the Korean Investment Corporation, the Kuwait Investment Authority, and the Mizuho Corporate Bank in January 2008. The China Investment Corporation invested $5.6 billion in Morgan Stanley in December 2007. U.S. Government Accountability Office, *Sovereign Wealth Funds: Publicly Available Data on Sizes and Investments of Some Funds Are Limited,* at 44–45 (Sept. 2008) (GAO–08–946) (online at www.gao.gov/new.items/d08946.pdf).

[32] New York Times, *Korean Bank in Talks With Lehman Brothers* (Sept. 2, 2008) (online at www.nytimes.com/2008/09/02/business/worldbusiness/02iht-kdb.15817700.html); Christine Harper, *Morgan Stanley Said to Be in Talks With China's CIC,* Bloomberg (Sept. 18, 2008) (online at www.bloomberg.com/apps/news?pid=newsarchive&sid=aAQouiUZ6004).

more effective than cross-border resolution arrangements that are available in times of distress."[33]

When the financial crisis hit, and firms with significant operations outside their home countries experienced severe pressure or failed, there was a widespread assumption that the countries where they were headquartered would be responsible for any government rescue. Officials in the United States and across the world faced the difficult and costly task of resolving these highly complex corporate structures, including accounting for or unwinding internal and external business transactions across multiple jurisdictions.[34] Depending on the relative importance and interconnectedness of a global firm's operations in a particular host country, local regulators also faced challenges in containing the damage from a failing affiliate of a foreign-owned firm.[35] U.S. and international regulators faced challenges in assisting these institutions in an effective and orderly fashion, largely because they were unprepared and ill-equipped to deal with such complex institutions operating across multiple jurisdictions.[36]

The crisis revealed that challenges in one area of the firm can quickly infect the entire organization.[37] It is important to note that a bank's ability—or the market's perception of a bank's ability—to honor its obligations is of the utmost importance in global finance. Regulatory capital at the parent level holds the entire institution together by backstopping the firm's obligations and financing arrangements across its global operations.[38] Thus, if the foreign parent of an institution is in trouble, this will impact the market's assessment of the creditworthiness of an affiliate located in a different country. Credit ratings will come under pressure. Depositors, counterparties, and customers will likely begin to flee, further pres-

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[33] International Monetary Fund, *Resolution of Cross-Border Banks—A Proposed Framework for Enhanced Coordination,* at 8 (June 11, 2010) (online at www.imf.org/external/np/pp/eng/2010/061110.pdf) (hereinafter "IMF Proposed Framework for Enhanced Coordination").

[34] Lehman Brothers is an example of a failed cross-border institution that has been exceedingly difficult to resolve because of its complex structure and its extensive international operations. When Lehman Brothers Holdings filed for bankruptcy, contagion spread throughout the entire bank because the financial health of Lehman Brothers was inextricably intertwined with the financial health of the holding company and each of the 2,985 Lehman companies operating in 50 countries. U.S. and international regulators did not have a comprehensive plan on how to resolve such a complex institution, so regulators began wind-down proceedings in their respective jurisdictions, including Switzerland, Japan, Singapore, Hong Kong, Germany, Luxembourg, Australia, the Netherlands, and Bermuda. However, the resolution of Lehman has been neither orderly nor effective because regulators in each country have made little effort to communicate or coordinate their wind-down proceedings. *See* Bank for International Settlements, Basel Committee on Banking Supervision, *Report and Recommendations of the Cross-border Bank Resolution Group,* at 14–15 (Mar. 2010) (online at www.bis.org/publ/bcbs169.pdf) (hereinafter "Report and Recommendations of the Cross-border Bank Resolution Group"). *See also* United States Bankruptcy Court, Southern District of New York, *Report of Anton R. Valukas, Examiner,* at 1482–1487 (Mar. 11, 2010) (online at lehmanreport.jenner.com/VOLUME%204.pdf).

[35] *See* IMF Proposed Framework for Enhanced Coordination, *supra* note 33, at 8 ("Certain branches or subsidiaries may, in economic terms, be comparatively insignificant to a group yet be of critical importance to their host country's financial system.").

[36] *See* Report and Recommendations of the Cross-border Bank Resolution Group, *supra* note 34, at 4–5, 29. *See also* Section E.3.b, *infra.*

[37] IMF Proposed Framework for Enhanced Coordination, *supra* note 33, at 8.

[38] "As [a] result of the interconnectedness of the financial group's legal entities, weaknesses in one entity can adversely affect the entire group. In group structures where liquidity is centralized, any sudden and material downgrading of the central entity's credit ratings or the opening of insolvency proceedings against it would lead to the immediate illiquidity of the other entities in the group. The triggering of cross default or cross guarantee arrangements for funding purposes as a result of rating downgrades or otherwise may also lead to financial distress in other parts of the group." IMF Proposed Framework for Enhanced Coordination, *supra* note 33, at 8.

suring the firm and its foreign branches, affiliates or subsidiaries. As the recent crisis demonstrated, this process is often swift and brutal.

C. Description of the International Financial Crisis

1. How the Crisis Developed

a. Timeline of Crisis

The global financial crisis grew out of problems in the U.S. subprime housing market. Those problems became widely apparent in the summer of 2007, when two hedge funds from The Bear Stearns Companies, Inc. (Bear Stearns) with heavy subprime exposure collapsed, and rating agencies began to downgrade scores of subprime securities.[39] Numerous European banks had invested in U.S subprime securities, and their balance sheets experienced stress as those investments lost value. In a few instances, those losses popped into public view in 2007. On August 8, with the market for subprime securities cratering, French bank BNP Paribas suspended withdrawals from three investment funds that had exposure to subprime loans.[40] On August 9, Dutch investment bank NIBC Bank N.V. (NIBC) announced that it lost €137 million ($189 million)[41] in the first half of 2007 on investments with exposure to subprime loans.[42] Also in the summer of 2007, two state-owned German banks with exposure to U.S. subprime loans, Sachsen Landesbank (Sachsen LB) and IKB Deutsche Industriebank AG (IKB), received assistance from other state-owned banks in Germany.[43] The emerging problems in the U.S. housing market also began to affect commercial paper markets, since much of that paper, issued by banks as a source of short-term funding, was collateralized by U.S. housing-related securities.[44]

Amid the U.S.-centered market turmoil, Northern Rock plc (Northern Rock), a highly leveraged U.K. mortgage lender that held nearly one-fifth of all U.K. mortgages and relied heavily on short-term financing,[45] was unable by September 2007 to continue funding its operations. The U.K. government lent an unspecified amount to Northern Rock and, with a bank run under way, guaranteed its deposits. In February 2008, after Northern Rock's finan-

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[39] *See* Congressional Oversight Panel, *December Oversight Report: Taking Stock: What Has the Troubled Asset Relief Program Achieved?,* at 8–17 (Dec. 9, 2009) (online at cop.senate.gov/documents/cop-120909-report.pdf) (hereinafter "December Oversight Report").

[40] BNP Paribas, *Background Information on Suspension and Reopening of ABS Funds in August* (2007) (online at media-cms.bnpparibas.com/file/76/1/5761.pdf).

[41] Exchanges from foreign currencies into U.S. dollars are noted in parentheticals throughout this report. All exchanges are calculated using interbank exchange rates in the relevant time period. Exchange rates are calculated using OANDA Corporation's historical exchange rate database (online at www.oanda.com/currency/historical-rates). In some cases the abbreviation USD is used in order to distinguish U.S. dollars from Canadian and Australian dollars.

[42] NIBC, *NIBC Reports Preliminary 2007 Half Year Results* (Aug. 9, 2007) (online at www.nibc.com/press/pressreleases/financialPress/Pages/pressrelease_1-2007-10.aspx).

[43] Europa, *State Aid: Commission Launches Probe into State Bail-Outs of IKB and Sachsen LB* (Feb. 27, 2008) (online at europa.eu/rapid/pressReleasesAction.do?reference=IP/08/314&format=HTML&aged=0&language=EN&guiLanguage=en) (hereinafter "Commission Launches Probe into State Bail-Outs").

[44] Viral Acharya and Philipp Schnabl, *Do Global Banks Spread Global Imbalances? The Case of Asset-Backed Commercial Paper During the Financial Crisis of 2007–09* (Oct. 15, 2009) (online at www.imf.org/external/np/res/seminars/2009/arc/pdf/acharya.pdf).

[45] Hyun Song Shin, *Reflections on Northern Rock: The Bank Run That Heralded the Global Financial Crisis,* Journal of Economic Perspectives, Vol. 23, No. 1, at 101–109 (Winter 2009) (online at pubs.aeaweb.org/doi/pdfplus/10.1257/jep.23.1.101).

cial condition deteriorated further, the U.K. government nationalized the firm.[46] The collapse of Northern Rock presaged what would become more apparent in 2008 and beyond: not only did the United States experience a housing bubble, but so did the United Kingdom, Ireland, Spain, and Denmark,[47] among other countries.[48]

March 2008 brought the collapse of Bear Stearns, which also was highly leveraged and had considerable exposure to subprime loans. Because the U.S. government facilitated a private purchase with government support,[49] the immediate global repercussions of Bear Stearns' demise were limited. Still, the crisis continued to intensify. On April 21, 2008, the Bank of England announced a liquidity scheme under which banks could swap certain mortgage-related securities for UK Treasury bills,[50] following the introduction of a similar program in the United States.[51] On July 11, 2008, the Danish National Bank granted an unlimited liquidity facility to Roskilde Bank, and a private association of nearly all the banks in Denmark provided a guarantee on losses of DKK 750 million ($158 million) on the liquidity facility, with further losses guaranteed by the Danish government.[52]

The tremors that shook global financial markets between August 2007 and August 2008 gave way in September 2008 to an enormously destructive earthquake. The epicenter was the United States, where the government took Fannie Mae and Freddie Mac into conservatorship and guaranteed their debts, allowed Lehman Brothers to enter bankruptcy, and authorized lending of up to $85 billion to prevent the bankruptcy of AIG.[53] But the reverberations were felt around the world, and especially in western Europe,

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[46] *See* National Audit Office, *Her Majesty's Treasury: The Nationalization of Northern Rock* (Mar. 20, 2009) (online at www.nao.org.uk/publications/0809/northern_rock.aspx) (hereinafter "The Nationalization of Northern Rock").

[47] *See* Jānis Malzubris, *Ireland's Housing Market: Bubble Trouble,* ECFIN Country Focus (Sept. 26, 2008) (online at ec.europa.eu/economy_finance/publications/publication13187_en.pdf). *See also* Danske Bank, *Denmark: House Prices Falling* (Apr. 24, 2008) (online at mediaserver.fxstreet.com/Reports/ec9a150d-8773-45c5-988d-d8a08a4fb198/131bf1e5-826d-4d38-b23f-c33c11c201bb.pdf).

[48] France, Sweden, the Netherlands, and Italy also experienced large increases in housing prices between 1997 and 2007. Reuven Glick and Kevin J. Lansing, *Global Household Leverage, House Prices, and Consumption,* Federal Reserve Bank of San Francisco Economic Letter, No. 2010–01, at 3 (Jan. 11, 2010) (online at www.frbsf.org/publications/economics/letter/2010/el2010-01.pdf).

[49] The Federal Reserve Bank of New York lent approximately $28.8 billion to a newly established, government-backed limited liability company, Maiden Lane LLC, to buy from Bear Stearns certain mortgage-related securities and loans, and associated hedges. The purpose of this transaction was to facilitate the merger of Bear Stearns with JPMorgan Chase. Federal Reserve Bank of New York, *Maiden Lane Transactions* (online at www.ny.frb.org/markets/maidenlane.html) (accessed Aug. 10, 2010).

[50] This scheme allowed banks to swap illiquid assets—generally residential mortgage-related securities that were rated AAA and not backed by U.S. mortgages—for UK Treasury bills in exchange for a fee, and for a period of up to three years. Bank of England, *Special Liquidity Scheme: Information* (Apr. 21, 2008) (online at www.bankofengland.co.uk/markets/sls/sls-information.pdf).

[51] The Federal Reserve established the Term Securities Lending Facility in March 2008. *See* Board of Governors of the Federal Reserve System, *Term Securities Lending Facility* (Feb. 5, 2010) (online at www.federalreserve.gov/monetarypolicy/tslf.htm).

[52] On August 24, the Danish National Bank and the private association of banks began the liquidation of Roskilde Bank. *See* Letter from Neelie Kroes, commissioner for competition policy, European Commission, *Aid for Liquidation of Roskilde Bank* (Nov. 5, 2008) (online at ec.europa.eu/competition/state_aid/register/ii/doc/NN-39-2008-WLWL-en–05.11.2008.pdf).

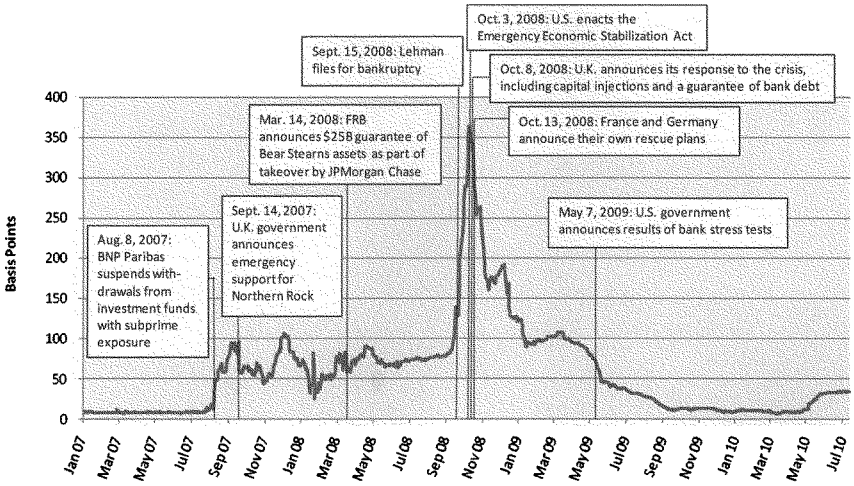
[53] The U.S. government took a controlling equity stake in Fannie Mae, Freddie Mac, and AIG, and it made changes in the management of all three firms. While these steps are characteristics of nationalizations, there is no consensus on whether the rescues of these three firms should be counted as nationalizations. For a discussion of nationalizations abroad, see Section C.2.b, *infra.* For a more detailed description of the key events in the financial crisis from a U.S. perspective, see the Panel's December 2009 report. December Oversight Report, *supra* note 39.

where the largest banks are often more highly integrated with the rest of the global financial system than they are in other parts of the world.[54]

Fears of cascading failures across the financial landscape were stoked by not only legacy toxic asset and counterparty exposures, but also capitalization levels at major European institutions that offered little cushion to absorb market fears of more pronounced losses. Market and counterparty confidence collapsed, necessitating increased intervention by government entities across the globe to battle what had now become an international financial crisis. Interbank lending rates, which measure risk aversion and fears of bank insolvency, illustrated the viral nature of what began as a relatively localized U.S. subprime crisis. This played out across the European and U.S. interbank markets, creating a credit squeeze, given the dependence on short-term wholesale funding on both sides of the Atlantic.

The widening in spreads shown in Figure 8 mirrors the key phases of the financial crisis, from the onset of the crisis in late summer 2007 to the collapse of Bear Stearns in March 2008, and later the bankruptcy of Lehman Brothers in September 2008, heralding the beginning of the most pronounced period of market stress.

FIGURE 8: LIBOR OIS SPREAD THROUGHOUT THE CRISIS[55]



Amid the market panic in September 2008, developed countries responded rapidly. The United States and European nations undertook numerous similar actions to stabilize financial markets. These actions included instituting recapitalization programs, nationalizing financial institutions, increasing deposit insurance, guaranteeing assets generally, purchasing toxic assets, and relaxing ac-

[54] *See, e.g.*, Figure 3, *supra,* which shows that Credit Suisse, Deutsche Bank, HSBC, and UBS derived between 27.7 percent and 36.8 percent of their 2006 revenue from the United States.

[55] The sovereign debt crisis in Europe has caused spreads to increase in recent months. Data provided by SNL financial.

counting standards. The United States took some steps in September 2008,[56] but it also quickly began coordinating with other countries. On September 18, three days after Lehman Brothers filed for bankruptcy, the U.S. Securities and Exchange Commission (SEC) and the U.K.'s Financial Services Authority orchestrated a temporary ban on short selling financial companies.[57] Over the course of the next month, the Federal Reserve also coordinated with other central banks to expand pre-existing currency swap agreements and cut interest rates by 0.5 percentage points.[58] In late September, the U.S. government continued to respond on an ad hoc basis,[59] and several of its counterparts across Europe organized rescues of specific banks.[60] Iceland took the most extreme steps, nationalizing three of its largest banks, which were highly leveraged and unable to roll over their sources of funding.[61]

On October 4, the day after the U.S. government's enactment of EESA, the leaders of Germany, France, the United Kingdom and Italy met to coordinate their responses to the crisis, and in the following days, Germany, France, and the United Kingdom all announced their own comprehensive responses. On October 8, the U.K. government announced the establishment of a scheme to guarantee bank debt. It also rolled out a plan to provide enough capital to eight large financial institutions so that each could raise its Tier 1 capital by £25 billion ($44 billion),[62] though only Lloyds and Royal Bank of Scotland (RBS) took the funds. On October 13, the French government announced a €320 billion ($429 billion) fund to provide loans to financial institutions; among the French banks that eventually got assistance were BNP Paribas and Société Générale. The same day, the German government announced a €70 billion ($94 billion) fund for recapitalizing banks, whose eventual recipients included Commerzbank AG (Commerzbank) and WestLB AG (WestLB), and a €400 billion ($537 billion) scheme for guaran-

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[56] Lehman Brothers filed for Chapter 11 on September 15, 2008. The next day, the United States agreed to lend up to $85 billion to AIG. *See generally* December Oversight Report, *supra* note 39, at 11, 15; June Oversight Report, *supra* note 10, at 58.

[57] U.S. Securities and Exchange Commission, *SEC Halts Short Selling of Financial Stocks to Protect Investors and Markets* (Sept. 19, 2008) (online at www.sec.gov/news/press/2008/2008-211.htm). Financial Services Authority (U.K.), *FSA Statement on Short Positions in Financial Stocks* (Sept. 18, 2008) (online at www.fsa.gov.uk/pages/Library/Communication/PR/2008/102.shtml). Canada and Germany were among countries that instituted similar bans. Ontario Securities Commission, *OSC Issues Temporary Order Prohibiting Short Selling of Certain Financial Sector Issuers* (Sept. 19, 2008) (online at www.osc.gov.on.ca/en/19317.htm); Bunderanstalt für Finanzdienstleistungsaufsicht, *BaFin Bans Short Selling—Eleven Stocks Concerned* (Sept. 19, 2008) (online at www.bafin.de/cln_109/nn_720788/SharedDocs/Mitteilungen/EN/2008/pm_080919_leerv_en.html).

[58] *See* Section E.2, *infra. See also* Board of Governors of the Federal Reserve System, *FOMC Statement: Federal Reserve and Other Central Banks Announce Reductions* (Oct. 8, 2008) (online at www.federalreserve.gov/newsevents/press/monetary/20081008a.htm).

[59] *See, e.g.,* the Federal Reserve Board's decision to grant bank-holding company status to Goldman Sachs and Morgan Stanley on September 21, 2008. Board of Governors of the Federal Reserve System, *Press Release* (Sept. 21, 2008) (online at www.federalreserve.gov/newsevents/press/bcreg/20080921a.htm).

[60] For a more detailed discussion of various governments' responses to the crisis, *see* Section C.2, *infra.*

[61] The three banks were Kaupthing, Glitnir and Landsbanki. For further discussion of the Icelandic bank nationalizations, see Section C.2.b.

[62] Abbey National plc (Abbey); Barclays plc (Barclays); Halifax Bank of Scotland Group plc (HBOS); HSBC Bank plc; Lloyds TSB; Nationwide Building Society (Nationwide); Royal Bank of Scotland; and Standard Chartered plc (Standard Chartered). HM Treasury, *Financial Support to the Banking Industry* (Oct. 8, 2008) (online at www.hm-treasury.gov.uk/press_100_08.htm) (hereinafter "Financial Support to the Banking Industry"). A bank's Tier 1 capital is its core capital, which consists predominantly of common stock and retained earnings. Bank for International Settlements, *Instruments Eligible for Inclusion in Tier 1 Capital* (Oct. 27, 1998) (online at www.bis.org/press/p981027.htm).

teeing bank financing. The following day, the U.S. government announced its own plan for guaranteeing newly issued bank debt, the Federal Deposit Insurance Corporation's (FDIC) Temporary Liquidity Guarantee Program;[63] its own program of capital injections, Treasury's Capital Purchase Program (CPP), which initially included eight large financial institutions;[64] and a Federal Reserve program, the Commercial Paper Funding Facility, to purchase commercial paper and thereby provide a backstop to that market.[65] In November 2008, the leaders of nations in the G–20 met in Washington, where they agreed on a five-point plan for financial reform.[66]

In January 2009, the British government announced another extraordinary assistance program, the Asset Protection Scheme (APS). Under this program, banks were able to buy protection from the government on a specified portfolio of assets. Again, only Lloyds and RBS agreed to participate.[67] This program was similar in structure to the U.S. government's Asset Guarantee Program (AGP), which preceded the British plan and had only two participants, Citigroup and Bank of America Corporation (Bank of America).[68]

Despite some efforts at a more comprehensive solution,[69] the balance sheets of many European banks continued to suffer throughout late 2008 and early 2009, and smaller European governments responded with additional assistance on a piecemeal basis.[70]

b. Impact on Major Economies Outside the United States and Europe

Because the financial crisis originated in domestic housing bubbles, and was transmitted by highly leveraged multinational financial firms, countries that were shielded from those forces fared

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[63] Federal Deposit Insurance Corporation, *FDIC Announces Plan to Free Up Bank Liquidity* (Oct. 14, 2008) (online at fdic.gov/news/news/press/2008/pr08100.html) (hereinafter "FDIC Announces Plan to Free Up Bank Liquidity").

[64] The first eight participants in the CPP were JPMorgan Chase, Goldman Sachs, Citigroup, Bank of America, Wells Fargo, Morgan Stanley, Bank of New York Mellon, and State Street Corporation (State Street). *See* U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending August 4, 2010* (Aug. 6, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-6-10%20Transactions%20Report%20as%20of%208-4-10.pdf) (hereinafter "Treasury Transactions Report").

[65] U.S. Department of the Treasury, *U.S. Government Actions to Strengthen Market Stability* (Oct. 14, 2008) (online at financialstability.gov/latest/hp1209.html).

[66] For further discussion of the G–20, *see* Sections C.3 and E.3.b, *infra.*

[67] HM Treasury, *The Asset Protection Scheme (APS)* (online at www.hm-treasury.gov.uk/apa_aps.htm) (accessed Aug. 10, 2010).

[68] For further information about the Asset Guarantee Program, *see* Congressional Oversight Panel, *November Oversight Report: Guarantees and Contingent Payments in TARP and Related Programs,* at 13–27 (Nov. 6, 2009) (online at cop.senate.gov/documents/cop-110609-report.pdf) (hereinafter "November Oversight Report"). The Federal Reserve, Treasury, and the FDIC guaranteed a $301 billion pool of Citigroup assets at its inception, and Citigroup terminated its guarantee in December 2009. The U.S. government and Bank of America never agreed upon a finalized term sheet, and Bank of America ultimately paid $425 million to terminate the guarantee in September 2009.

[69] *See* Section C.2.a, *infra,* for a discussion of responses to the crisis by the U.K. and German governments, which were more systematic than the responses of several other European governments.

[70] For example, the Swiss government provided assistance to UBS, the Irish government took ownership of Anglo Irish Bank, the Netherlands provided assistance to ING and SNS Reaal N.V., the Belgian government took steps to stabilize Ethias Bank and KBC, and the Latvian government nationalized that nation's largest independent bank, Parex Banka.

comparatively well.[71] Brazil, India, China, Australia, and Canada, for example, generally avoided the banking crises that plagued the United States and much of Europe;[72] nonetheless their economies felt many of the aftereffects of the global financial crisis.

Brazil's banks were subject to tighter leverage requirements than existed in Europe and the United States, the result of reforms implemented after Brazil's 1990s-era banking crisis.[73] Nonetheless, the Brazilian economy, which had been experiencing strong growth, contracted in the fourth quarter of 2008 and the first quarter of 2009. The Brazilian government responded by cutting interest rates, providing a liquidity cushion to small Brazilian banks, and by enacting a fiscal stimulus program, among other steps. Growth returned to the economy in the second quarter of 2009, and according to one analyst, Brazil is one of the countries that has fared best during the global financial crisis.[74]

India also fared comparatively well. Its highly regulated banking sector had limited operations outside India, and therefore very little exposure to subprime lending in the United States. India did feel the follow-on effects of the crisis, though. Its export-driven economy suffered when global demand dropped; its financial sector suffered from the global liquidity squeeze, which led to a fall in lending; and its stock market lost roughly 50 percent of its value between June and December 2008. Although the Indian government did not provide capital to Indian banks, it did respond to the crisis with fiscal stimulus equal to about 2 percent of GDP, and it shifted from a tightening monetary policy to an expansionary one.[75]

China's financial system also fared relatively well during the crisis, though it should be noted that China's state-owned banks have benefited from repeated government rescues in the recent past.[76]

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[71] This is not to suggest that financial integration between nations has negative effects on balance. Potential benefits from international financial integration include the increased ability of nations to diversify and hedge against certain risks, and increased competition in domestic banking sectors because of new foreign entrants, resulting in lower borrowing costs. Potential costs include increased volatility, such that a financial shock in one country can result in a similar shock in another country. *See* Pierre-Richard Agenor, *Benefits and Costs of International Financial Integration: Theory and Facts* (2003) (online at people.ucsc.edu/~hutch/241B/Ec241b SYLLABUSWinter2010_files/Agenor_WorldEcon2003.pdf).

[72] Furthermore, countries that had significant economic integration with the major economies that were shielded from the financial crisis benefited from those ties. Examples include Australia and New Zealand, which are becoming increasingly economically integrated with China and India, and were not hit hard by the crisis. *See* Yan Sen, *Potential Growth of Australia and New Zealand in the Aftermath of the Global Crisis,* IMF Working Paper (May 2010) (WP/10/127) (online at www.imf.org/external/pubs/ft/wp/2010/wp10127.pdf).

[73] Brazil's minimum capital-to-asset ratio is 11 percent, higher than the 8 percent risk-based capital ratio used under the Basel agreement, and Brazil's largest banks exercised greater caution than was required, with capital-to-asset ratios averaging around 16 percent. This lower level of risk-taking provided Brazilian banks a larger cushion for losses than existed in large U.S. and European banks. *See* José Roberto Mendonça de Barros, *The Impact of the International Financial Crisis on Brazil,* Real Instituto Elcano (Apr. 12, 2010) (online at www.realinstitutoelcano.org/wps/portal/rielcano_eng/Content?WCM_GLOBAL_CONTEXT=/elcano/elcano_in/zonas_in/international+economy/ari38-2010).

[74] *Id.*

[75] Rajiv Kumar and Pankaj Vashisht, *The Global Economic Crisis: Impact on India and Policy Responses* (Nov. 2009) (online at www.adbi.org/files/2009.11.12.wp164.global.economic.crisis.india.pdf).

[76] *See* John P. Bonin and Yiping Huang, *Dealing With the Bad Loans of the Chinese Banks,* at 19 (Jan. 2001) (online at deepblue.lib.umich.edu/bitstream/2027.42/39741/3/wp357.pdf). Many Chinese banks were in need of capital at the height of the crisis in 2008, and one such bank did receive government funds, albeit for idiosyncratic reasons. Late in 2008, China's sovereign wealth fund purchased $19 billion in securities from Agricultural Bank of China Limited (ABC) (AgBank). Although AgBank had a large book of bad loans, this action was as much designed to put the bank on the road to an eventual public offering as to provide financial stability. *See*

China maintains capital controls that limit foreign investment by individuals and businesses; these controls had beneficial effects during the crisis, since Chinese investors had little exposure to troubled parts of the U.S. and European financial systems.[77] China's banks had invested heavily in U.S. securities, but those investments were generally not in subprime securities, but rather in safer Treasury bonds and securities issued by Fannie Mae and Freddie Mac,[78] which the U.S. government stepped in to backstop during the crisis.[79] Therefore, China's financial system, like Brazil's and India's, did not sustain major damage from the crisis. China's export-driven economy did suffer, though, from the sharp downturn in global demand and the slowdown in foreign investment. China's explosive growth slowed during the crisis, but the government countered the effects of the slowdown by increasing bank lending,[80] lowering interest rates, and introducing fiscal stimulus spending that was among the largest in the world as a percentage of GDP.[81]

Australia also suffered relatively little from the crisis. Its only decline in GDP occurred in the fourth quarter of 2009,[82] meaning

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Consulate-General of the People's Republic of China in New York, *Agricultural Bank of China to Get $19 Billion Capital Injection* (Oct. 22, 2008) (online at www.nyconsulate.prchina.org/eng/xw/t519094.htm). AgBank completed the Hong Kong portion of its offering on July 15, 2010. *See* Agricultural Bank of China Limited, *Global Offering* (June 30, 2010) (online at www.sfc.hk/sfcCOPro/EN/displayFileServlet?refno=0608&fname=CoverEng_Jun3010.pdf).

[77] *See* Nicholas Lardy, Anthony M. Solomon Senior Fellow, Peterson Institute for International Economics, Lecture at New York University's Stern School of Business, *China's Role in the Current Global Economic Crisis* (Feb. 23, 2009) (hereinafter "China's Role in the Current Global Economic Crisis").

[78] In June 2008, foreign investors owned $1.46 trillion of long-term debt issued by Fannie Mae, Freddie Mac, other government-sponsored enterprises, and securities guaranteed by Ginnie Mae. The foreign-owned share was 21 percent of the $6.99 trillion of such debt outstanding at the time, up from 7.3 percent in 2000. China held 36 percent of the foreign-owned share in June 2008. *See* U.S. Department of the Treasury, Federal Reserve Bank of New York, and Board of Governors of the Federal Reserve System, *Report on Foreign Portfolio Holdings of U.S. Securities as of June 30, 2008* at 5, 8 (Apr. 2009) (online at www.treas.gov/tic/shla2008r.pdf).

[79] The U.S. government's decision to take Fannie Mae and Freddie Mac into conservatorship provided greater assurance to investors that the government would stand behind their debt than previously existed in the marketplace, even though there was already a widespread belief that the U.S. government would not allow the two congressionally chartered mortgage firms to go bankrupt. When the conservatorship was announced, James B. Lockhart, director of the Federal Housing Finance Agency (FHFA), stated, "Monday morning, the businesses will open as normal, only with stronger backing for the holders of MBS, senior debt and subordinated debt." Federal Housing Finance Agency, *Statement of FHFA Director James B. Lockhart* (Sept. 7, 2008) (online at www.fhfa.gov/webfiles/23/FHFAStatement9708final.pdf). Mark Zandi, chief economist at Moody's Economy.com, wrote at the time: "The biggest winners are Fannie's and Freddie's debt holders. Indeed, it was the mounting evidence that central banks, sovereign wealth funds, and other global investors were growing reluctant to invest in the debt that was the catalyst for Treasury's actions. Fannie and Freddie debt is now effectively U.S. Treasury debt, ensuring that debt holders will remain whole." Mark Zandi, *The Fannie-Freddie Takeover: A Latter-Day RTC* (Sept. 7, 2008) (online at www.economy.com/dismal/article_free.asp?cid=108515).

[80] This rise in bank lending is today contributing to concerns that China has its own real estate bubble, which is prompting concerns about the Chinese banking sector and has led Chinese officials to conduct stress tests of Chinese banks. For further discussion, see Section E.1, *infra.*

[81] Of the nations in the G–20, only Saudi Arabia enacted a larger fiscal stimulus, calculated as a percentage of GDP, for 2009 and 2010 than China. International Monetary Fund, Group of Twenty, Meeting of the Deputies, January 31–February 1, 2009, London, U.K., *Note by the Staff of the International Monetary Fund,* at 18 (online at www.imf.org/external/np/g20/pdf/020509.pdf). *See generally* Congressional Research Service, *China and the Global Financial Crisis: Implications for the United States* (June 3, 2009) (online at www.fas.org/sgp/crs/row/RS22984.pdf); China's Role in the Current Global Economic Crisis, *supra* note 77.

[82] Reserve Bank of Australia, *Statistical Tables* (online at www.rba.gov.au/statistics/tables/index.html#output_labour) (accessed Aug. 4, 2010). The country's economic stability partially resulted from its large exports of iron ore and coal, which increased in price in early 2010 and were especially in demand as East Asian countries resumed their rapid pace of growth. *See* Glenn Stevens, governor of the Reserve Bank of Australia, Remarks before the Western Sydney

Continued

that Australia did not enter into a recession.[83] Australia's banks for the most part remained healthy and profitable throughout the crisis,[84] though the country's banking system did suffer the collapse of two large Australian companies and one particularly large write-down on subprime mortgages.[85] Australian banks maintained high capital levels and, because domestic opportunities for investment were plentiful, their balance sheets contained relatively few internationally tradable securities such as securitized loans.[86] Australian banks also maintained high lending standards by issuing relatively few loans requiring minimal documentation or a minimal down payment.[87]

Although Canada's GDP decreased for four straight quarters in late 2008 and early 2009, its recession was linked strongly to its reliance on the United States as a market for its exports.[88] Its banking system remained healthy. Leverage in Canadian banks was limited.[89] Canadian banks also sustained only modest losses on structured products, which include the mortgage-related securities that led to enormous losses at U.S. and European banks.[90] To bolster the economy, the Canadian government passed a $62 billion CAD ($51 billion) stimulus package in January 2009 and gradually reduced interest rates from 3 percent in October 2008 to 0.25 percent in April 2009.[91]

c. Financial Institutions Most Affected

The interconnections within the global financial marketplace and the significant cross-border operations of major U.S. and foreign-

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Business Connection (June 9, 2010) (online at www.rba.gov.au/speeches/2010/sp-gov-090610.html).

[83] The Australian government's large fiscal stimulus in February 2009—the $42 billion AUD ($26.5 billion) stimulus was equal to about 3 percent of GDP—and interest rate cuts from 7 percent in September 2008 to 3 percent in April 2009 likely helped sustain the domestic economy. Office of Australian Deputy Prime Minister and Treasurer Wayne Swan, *Press Release—$42 Billion Nation Building and Jobs Plan* (Feb. 3, 2009) (online at www.treasurer.gov.au/DisplayDocs.aspx?doc=pressreleases/2009/009.htm&pageID=003&min=wms&Year=2009&DocType=0); Reserve Bank of Australia, *Statistical Tables* (online at www.rba.gov.au/statistics/tables/index.html#interest_rates) (accessed Aug. 4, 2010).

[84] Luci Ellis, head of the Reserve Bank of Australia Financial Stability Department, Remarks at Victoria University, *The Global Crisis: Causes, Consequences, and Countermeasures* (Apr. 15, 2009) (online at www.rba.gov.au/speeches/2009/sp-so-150409.html) (hereinafter "Luci Ellis Remarks at Victoria University").

[85] Lyndal McFarland, *Crisis on Wall Street: In Australia, ANZ and NAB Join Loan-Loss Chorus,* Wall Street Journal (Eastern Edition), at C.2 (Dec. 19, 2008); Lyndal McFarland, *Despite Calm, Risks Remain in Australian Banks* Wall Street Journal (Eastern Edition), at C.7 (Sept. 10, 2008).

[86] Luci Ellis Remarks at Victoria University, *supra* note 84.

[87] Luci Ellis Remarks at Victoria University, *supra* note 84.

[88] Data provided by Bloomberg. Close to 80 percent of Canada's exports go to the United States. Central Intelligence Agency, *The World Factbook* (online at www.cia.gov/library/publications/the-world-factbook/geos/ca.html) (accessed Aug. 10, 2010).

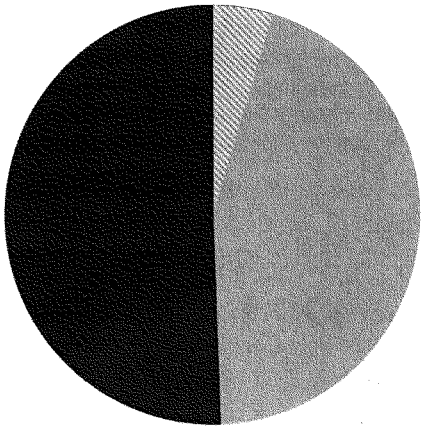
[89] Major Canadian banks had an asset-to-capital ratio of 18 to 1, compared to ratios of 25 to 1 in the United States and 30+ to 1 in Europe. Mark Carney, governor of the Bank of Canada, Remarks at the Canadian Club of Montreal, *Reflections of Recent International Economic Developments* (Sept. 25, 2008) (online at www.bankofcanada.ca/en/speeches/2008/sp08-12.html).

[90] *Id.* Canada's banks lacked one of the incentives to securitize residential mortgages that existed elsewhere, which was the opportunity to hold less regulatory capital against the mortgages than would otherwise be required. Because Canadian mortgages must usually be fully insured by banks and homeowners, securitized mortgages and individual mortgages are usually assigned the same risk-weighted rate in regulatory capital rules. *Don't Blame Canada,* The Economist, at 7 (May 16, 2010).

[91] Government of Canada, *The Challenge: Canada's Economic Action Plan* (online at www.actionplan.gc.ca/eng/feature.asp?featureId=16) (accessed Aug. 4, 2010); Bank of Canada, *Canadian Interest Rates* (online at www.bankofcanada.ca/en/rates/interest-look.html) (accessed Aug. 4, 2010).

based firms widened the fallout of the crisis, requiring a multi-pronged response by a host of national regulators and central banks. The multinational nature of the largest global financial institutions contributed to both the direct losses on troubled securities assets and the cross-border panic that imperiled the functioning of global capital markets. Figure 9 shows those losses by banks based in the key regions impacted by the financial crisis.

FIGURE 9: FINANCIAL CRISIS LOSSES ON SECURITIES HOLDINGS FOR BANKS LOCATED IN NORTH AMERICA, EUROPE AND ASIA[92]



Region	Amount	Percent of Total (Selected Regions)
Asia	$38B	4.7%
Europe	$359B	44.7%
North America	$406B	50.6%

Comparatively weaker capitalization levels, illustrated by higher leverage (in many cases twice that of comparable U.S. peers), stoked fears among investors and market participants regarding the ability of the European banking sector to withstand incremental losses. (Comparisons of write-downs, leverage and Tier 1 capital ratios are outlined below in Figure 11.) In the context of the relative importance of the banking system in Europe to economic growth (discussed below), there was growing fear among some market participants that European authorities were not taking sufficiently aggressive steps to shore up capital at key institutions.[93]

[92] As of First Quarter 2010. Total write-downs and losses do not include losses related to loan charge-offs, increases in provisions for loan losses, and credit costs. Data provided by Bloomberg.

[93] Panel staff conversation with Simon Johnson, professor at MIT and former chief economist of the International Monetary Fund (July 30, 2010); Panel staff conversation with Roubini Global Economics Analysts Elisa Parisi and David Nowakowski (July 28, 2010).

To some degree, these fears were compounded by variations in the accounting treatment of balance sheet assets.[94] [95] Outside the United States, most countries permit companies to report under the International Financial Reporting Standards (IFRS). While there are similarities between the IFRS and U.S. Generally Accepted Accounting Principles (GAAP), there are important differences regarding fair value accounting that have created discrepancies when U.S. financial institutions and international financial institutions recognize losses arising from troubled assets.[96] In the case of European banks, the majority of assets are valued at amortized cost rather than fair value, which delayed the recognition of losses and increased uncertainty during the crisis.[97]

Figure 10 below compares the write-downs that U.S. and European banks have taken on various asset classes through the duration of the crisis.

FIGURE 10: ESTIMATED WRITE-DOWNS ON U.S. AND FOREIGN BANK-HELD SECURITIES [98]

[*Billions of USD*]

	Estimated Holdings	Estimated Write-downs	Implied Cumulative Loss Rate	Share of Total Regional Write-downs	Share of Global Write-downs
U.S. Banks					
Residential mortgage	1,495	189	12.6	50.9%	20.6%
Consumer	142	0	0.0	0.0%	0.0%
Commercial mortgage	196	63	32.1	17.0%	6.9%
Corporate	1,115	48	4.3	12.9%	5.2%
Governments	580	0	0.0	0.0%	0.0%
Foreign	975	71	7.3	19.1%	7.8%
Total for U.S. Banks	4,503	371	8.2	–	40.5%

[94] Under U.S. GAAP, U.S. institutions may account for assets in different ways. For example, a commercial bank may record a mortgage-backed security ("MBS") at amortized cost by classifying the security as held-to-maturity ("HTM"), whereas an investment bank may record a MBS at fair value by classifying the security as available-for-sale (AFS). Held-to-maturity (HTM) securities and held-for-investment (HFI) loans are recorded on the balance sheet at amortized cost rather than fair market value, whereas available-for-sale (AFS) securities are recorded on the balance sheet at fair market value. Only when a financial institution determines that the HTM security is impaired and the impairment is other-than-temporary (OTTI) will the institution record the value of the security at its fair market value. The institution has the discretion to determine whether an OTTI exists and will: (1) calculate the fair value of the asset; (2) determine if the decline in value is related to a credit event; and (3) determine if the investor is able or willing to hold the asset until it recovers its value. U.S. Securities and Exchange Commission, *Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on Mark-to-Market Accounting,* at 26, 30 (Dec. 30, 2008) (online at www.sec.gov/news/studies/2008/marktomarket123008.pdf) (hereinafter "SEC Study on Mark-to-Market Accounting").

[95] *Id.* at 47, 50, 104. The majority of commercial banks' assets, including large loan books, are reported at amortized cost. Commercial banks limit their use of fair value accounting to securities and derivatives. So, for example, commercial banks report subprime loan portfolios at amortized costs, but report subprime mortgage-backed securities at fair market value. In contrast, investment banks report the majority of assets at fair value because these institutions are not holding large loan portfolios, but are instead actively trading securities and derivatives.

[96] For further discussion of fair value accounting, see Section C.2.f, *infra.* There are several important differences between IFRS and GAAP fair value accounting including: (1) guidance on accounting for assets at fair value is scattered throughout IFRS and is sometimes inconsistent; (2) IFRS does not distinguish between debt securities and loans, so debt securities can be recorded on balance sheets as loans; (3) IFRS has different standards for recognizing impairment, which results in differences in the timing of when an impairment charge is recorded on the balance sheet; and (4) HTM securities are only written down for incurred credit losses, whereas GAAP securities are written down to fair value. SEC Study on Mark-to-Market Accounting, *supra* note 94, at 23–24, 32–33.

[97] Financial Crisis Advisory Group, *Report of the Financial Crisis Advisory Group,* at 4 (July 28, 2009) (online at www.ifrs.org/NR/rdonlyres/2D2862CC-BEFC-4A1E-8DDC-F159B78C2AA6/0/FCAGReportJuly2009.pdf).

FIGURE 10: ESTIMATED WRITE-DOWNS ON U.S. AND FOREIGN BANK-HELD SECURITIES [98]—Continued

[*Billions of USD*]

	Estimated Holdings	Estimated Write-downs	Implied Cumulative Loss Rate	Share of Total Regional Write-downs	Share of Global Write-downs
European Banks [99]					
Residential mortgage	1,191	157	13.2	33.0%	17.1%
Consumer	329	9	2.7	1.9%	1.0%
Commercial mortgage	315	74	23.5	15.5%	8.1%
Corporate	1,574	47	3.0	9.9%	5.1%
Governments	2,506	0	0.0	0.0%	0.0%
Foreign	2,615	152	5.8	31.9%	16.6%
Total for European Banks	9,261	476	5.1	–	52.0%
Asian Banks [100]					
Total for Asian Banks	1,728	69	4.0	–	7.5%
Totals for All Bank-Held Securities (U.S., Europe & Asia) [101]	**15,492**	**916**	**5.9**	**–**	**100.0**

[98] Data for U.S., Europe, and Asia bank losses on securities holdings only. Excludes write-down and losses related to bank holdings of loans. Estimated holdings based on Q1 2009 data. IMF Global Financial Stability Report, *supra* note 17, at 87.

[99] European banks include the United Kingdom, the Euro Area, and other mature European markets (Denmark, Norway, Iceland, Sweden, and Switzerland).

[100] Asian banks include Australia, Hong Kong SAR, Japan, New Zealand, and Singapore. Write-down data for Asian banks not categorized by asset type.

[101] Total references preceding sums for banking institutions headquartered in the United States, Europe, and Asia only.

Figure 11 below compares the write-downs during the crisis and key balance sheet metrics on the eve of the crisis among specific U.S. commercial banks, U.S. investment banks, and foreign banks. (Both U.S. commercial banks and European banks calculated and reported Tier 1 capital ratios under the Basel I framework during the crisis. In contrast, U.S. investment banks calculated and reported capital adequacy ratios under an alternative computation method created by the SEC, before beginning to report under the Basel II framework at the beginning of 2008.) [102]

FIGURE 11: BALANCE SHEET MEASURES (YEAR-END 2006) AND WRITE-DOWNS (2007–2010) OF U.S. AND FOREIGN INSTITUTIONS

[*Billions of USD*]

	Total Assets	Total Equity	Gross Leverage Ratio [103]	Tier 1 Risk-Based Capital Ratio [104]	Write-downs & Losses	
					3Q2007–1Q2010 [105]	Percent of 2006 Equity
U.S. Banks [106]						
Bank of America	1,460	135	10.8x	8.6%	23.5	17.4
Bear Stearns	350	12	29.0x	N/A	3.2	26.4
Citigroup	1,884	122	15.4x	8.6%	68.2	55.8
Goldman Sachs	838	36	23.4x	N/A	9.1	25.4
JPMorgan Chase	1,352	116	11.7x	8.7%	16.6	14.3
Lehman Brothers	504	19	26.2x	N/A	16.2	84.4
Merrill Lynch	841	39	21.6x	N/A	55.9	143.3
Morgan Stanley	1,121	35	31.7x	N/A	23.4	66.1
Foreign Banks [107]						
Banco Santander	1,100	62	17.7x	7.4%	0.0	0.0
Barclays	1,951	54	36.4x	7.7%	26.2	48.9
BNP Paribas	1,900	72	26.3x	7.4%	4.3	5.9
CIBC	271	11	24.6x	10.4%	9.5	86.4

[102] U.S. Securities and Exchange Commission, *Alternative Net Capital Requirements for Broker-Dealers That Are Part of Consolidated Supervised Entities,* 69 Fed. Reg. 34428 (June 21, 2004). This rule applied to five investment banks: Goldman Sachs, Morgan Stanley, Merrill Lynch, Bear Stearns, and Lehman Brothers.

FIGURE 11: BALANCE SHEET MEASURES (YEAR-END 2006) AND WRITE-DOWNS (2007–2010) OF U.S. AND FOREIGN INSTITUTIONS—Continued

[*Billions of USD*]

	Total Assets	Total Equity	Gross Leverage Ratio [103]	Tier 1 Risk-Based Capital Ratio [104]	Write-downs & Losses	
					3Q2007–1Q2010 [105]	Percent of 2006 Equity
Credit Suisse	1,030	48	21.3x	13.9%	19.1	39.5
Deutsche Bank	2,090	44	47.3x	8.5%	17.0	38.5
HBOS	930	32	29.3x	8.1%	15.2	47.9
HSBC	1,861	115	16.2x	9.4%	26.6	23.2
Royal Bank of Canada	411	21	19.4x	9.6%	5.9	27.8
Royal Bank of Scotland	1,705	89	19.2x	7.5%	31.3	35.2
Société Générale	1,262	44	28.6x	7.8%	12.8	29.0
Toronto-Dominion Bank	350	21	17.1x	12.0%	0.9	4.4
UBS	1,964	46	43.0x	11.9%	52.4	114.7

[103] Gross leverage ratio equals the ratio of total assets to total equity.

[104] Goldman Sachs, Morgan Stanley, Bear Stearns, Merrill Lynch, and Lehman Brothers did not begin reporting Tier 1 risk-based capital ratios until 2008.

[105] Included in the data are losses associated with the following: Non-mortgage ABS; Alt-A securities; Auction-rate securities; CDOs; CDS and other derivatives; CMBS; Subsidiaries, investments in other firms, and corporate debt; Leveraged loans and collateralized obligations; Monolines; Uncategorized mortgages and securities; Revaluation reserve and other comprehensive income; Prime mortgages and securities; Uncategorized residential mortgage asset write-downs; Structured Investment Vehicles and ABCP; Subprime RMBS; Trading losses. Write-downs and losses linked to credit costs associated with outstanding loans, loan charge-offs, and increases in provisions for loan losses were not included as these are to be expected as part of normal business operations. Data provided by Bloomberg.

[106] 2006 balance sheet data provided by SNL Financial.

[107] Data provided by Bloomberg.

As noted above, the European dimension to the crisis was magnified by the predominance of bank-intermediated credit in Europe, as opposed to other sources of credit. This raised the importance of European policy-makers stabilizing the banking system in order to contain further disruptions to the continent's economies. However, at the onset of the crisis—in the context of the comparatively more lenient accounting treatment discussed above—the centrality of these institutions in credit intermediation may have contributed to less aggressive action in the wake of Bear Stearns and the lead-up to the Lehman Brothers failure. As illustrated below, bank assets in the Eurozone area, including Denmark, Sweden, and the United Kingdom, were $48.5 trillion at the end of 2007, approximately three times the size of the region's GDP. This compares to bank assets of $11.2 trillion in the United States, a level on par with GDP. While these disparities indicate that the U.S. economy was more reliant on the capital markets to raise equity and intermediate lending through the debt markets, both the U.S. and European financial systems were highly susceptible to the fallout from the financial crisis. However, the concentration within Europe's banking sector raised the profile of a handful of multinational banks, relative to the region's overall economy. Additionally, many European banks were comparatively more dependent on foreign-sourced deposits, increasing their susceptibility to disruptions outside their home market.

FIGURE 12: BANK ASSETS AND CAPITAL MARKET VS. GDP, 2007[108]

[*billions of USD*]

Region	GDP	Total Bank Assets[109]	Stock Market Capitalization	Debt Securities			As Percentage of GDP		
				Public	Private	Total	Total Bank Assets	Stock Market Capitalization	Total Debt Securities
World	54,841	95,769	65,106	28,629	51,586	80,215	175	119	146
European Union[110]	15,741	48,462	14,731	8,778	19,432	28,211	308	94	179
Euro Area	12,221	35,097	10,040	7,606	15,398	23,004	287	82	188
North America	15,244	13,852	22,109	7,419	24,492	31,911	91	145	209
United States	13,808	11,194	19,922	6,596	23,728	30,324	81	144	220
Canada	1,436	2,658	2,187	823	764	1,587	185	152	111
Japan	4,384	10,087	4,664	7,148	2,066	9,214	230	106	210

[108] International Monetary Fund, *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risks,* at 177 (Apr. 2009) (online at www.imf.org/External/Pubs/FT/GFSR/2009/01/pdf/text.pdf) (hereinafter ''IMF 2009 Global Financial Stability Report'').

[109] Total assets of commercial banks, including subsidiaries.

[110] Figures for the European Union include totals from the Euro Area, Denmark, Sweden, and the United Kingdom.

This context is important for understanding efforts by the United States and foreign governments. Actions by Treasury and the Federal Reserve to stabilize the U.S. financial system and its largest financial institutions helped supplement rescue efforts in other countries, just as overseas rescue efforts enhanced stability measures within the U.S. market. This is due to both the interconnectedness of global financial markets, and the multinational nature of the largest U.S. and European financial institutions.

2. The Ad Hoc Nature of Government Responses

The international responses to the crisis took various forms;[111] likewise, the way in which governments came to the choices they made was varied. In some cases, governments emulated others' actions, as seen in the EU's decision to follow the United States' lead in stress-testing banks.[112] In some cases, markets forced governments to take certain actions, as when Ireland's move to increase deposit insurance led to a flow of U.K. deposits to Irish banks, prompting U.K. officials to increase their nation's deposit insurance.[113] And in some cases governments learned from past experience and adjusted their response accordingly, as when Ireland's asset management agency drew lessons from the Nordic bank crisis in the 1990s.

For the most part, governments across the globe responded to the crisis on an ad hoc basis as it unfolded. What this meant was that most of the responses were tailored to address immediate problems, and they tended to be targeted at specific institutions or specific markets, rather than the entire financial system. Home country regulators generally took responsibility for banks headquartered in their jurisdictions, and the evidence suggests that assistance was doled out less to stabilize the international financial landscape than to respond to potential fallout across a particular domestic market.[114] The different conditions that nations placed on the banks they rescued offer a good illustration of the frequent lack of international coordination in many of the responses. For example, the United Kingdom and France imposed lending targets for rescued banks, while the United States did not. The United States took warrants in rescued banks, which allowed for the potential realization of gains on its investments, but other nations did not follow suit. Restrictions on executive compensation and pay for board members also varied significantly in different countries.

These differences are not unexpected, given the speed with which the financial crisis spread and the volatility of markets at the time; the circumstances often did not permit measured cross-border cooperation, and while there was certainly a great deal of informal communication between countries, it did not necessarily lead to coordinated action. Furthermore, it is not clear that a more systemic

[111] These forms of intervention are discussed throughout Section C.2 and summarized by country in Annex I. See also the description of selected jurisdictions' responses in the Panel's April 2009 report. April Oversight Report, *supra* note 2, at 60–70.

[112] For further discussion of the EU's stress tests, see Section E.1.b, *infra.*

[113] For further discussion of Ireland's expanded deposit insurance, see Section C.2.c, *infra.*

[114] According to the IMF, "when the regulatory authorities are faced with the distress or failure of a financial institution within their territory, they tend to give primary consideration to the potential impact on their own stakeholders: namely, creditors to branches or subsidiaries located within their jurisdiction, depositors and, in the final analysis, local taxpayers." IMF Proposed Framework for Enhanced Coordination, *supra* note 33, at 9.

global response to the crisis would have yielded better results, given how quickly some countries emulated other countries' responses at the height of the crisis. There is also no reason to think that anything other than ad hoc, country-specific measures were feasible at the peak of the crisis, given that different countries have different interests, and they inevitably will seek to pursue their own interests during an emergency. Fortunately in this instance, the interests of the countries most affected tended to converge at the peak of the crisis—when a further meltdown of the global financial system would have had deleterious consequences for many nations—though they later began to diverge again.

a. Capital Injections

One of the most common government responses to the 2008 financial crisis was the direct purchase of securities from troubled banks in order to inject needed capital into these firms and the financial sector in general. Although the term "capital injections" most commonly refers to the purchase of common or preferred shares by a government, it can refer to a broad range of strategies.[115] (When classifying such actions, among the many variables to be considered are whether there is a private capital component to the plan, the type of securities or other assets that are purchased, whether the government takes a minority or majority stake, whether the securities are purchased at market value, and the degree of government involvement in management, board membership, and operations.) The more extreme forms of capital injections fade into "nationalization," discussed in the following section.

Equity capital injections are an efficient method of assisting failing financial institutions with non-performing assets, compared to asset purchases for instance, since the new equity can be leveraged. Former Treasury Secretary Henry Paulson explained the advantage of this method in his recent book on the financial crisis:

> To oversimplify: assuming banks had a ten-to-one leverage ratio, injecting $70 billion in equity would give us as much impact as buying $700 billion in assets. This was the fastest way to get the most money into the banks, renew confidence in their strength and get them lending again.[116]

Although most capital injection programs followed and appear to have been inspired by the TARP and its Capital Purchase Program (CPP),[117] some capital injections preceded the TARP, such as Germany's purchases of equity in four major banks between August 2007 and August 2008.[118] The United Kingdom's capital injection

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[115] Organisation for European Co-operation and Development, *Glossary of Statistical Terms: Capital Injections* (online at stats.oecd.org/glossary/detail.asp?ID=6233) (accessed Aug. 10, 2010).

[116] Henry M. Paulson, Jr., *On the Brink,* at 337 (2010).

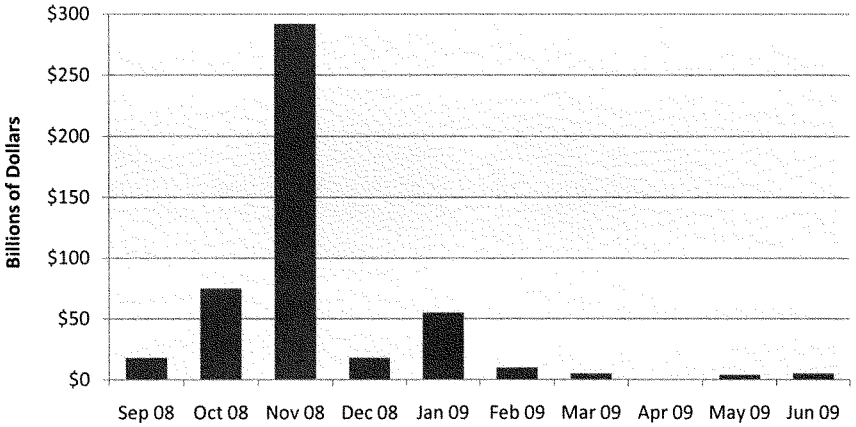
[117] The CPP has been discussed extensively in previous Panel reports, notably the Panel's February 2009, July 2009, December 2009, January 2010, and July 2010 reports.

[118] *See, e.g.,* Commission Launches Probe into State Bail-Outs, *supra* note 43. *See also* Frank Hornig, Lothar Pauly, and Christian Reiermann, *Bad Debts: American Mortgage Crisis Rattles German Banking Sector,* Der Speigel (Aug. 10, 2007) (online at www.spiegel.de/international/business/0,1518,499160-2,00.html) (describing the capital injections into IKB by state-backed Kreditanstalt für Wiederaufbau (KFW). The four banks that were assisted between Aug. 2007 and Aug. 2008 were IKB, WestLB, BayernLB, and SachenLB).

program, discussed below, was also a likely inspiration for similar programs.[119]

Following the establishment of the TARP on October 3, 2008, many countries created similar stabilization funds that included a capital injection component. Figure 13 below shows the volume of capital injections implemented by G–20 countries between September 2008 and June 2009, with the bulk of capital injections occurring in November 2008.

FIGURE 13: GOVERNMENT CAPITAL INJECTIONS BY G–20 NATIONS[120]



Many EU nations, in particular, established capital injection programs. For instance, on October 17, 2008, the German parliament enacted the Financial Market Stability Act, which created a €480 billion ($646 billion) stabilization fund known as the Sonderfonds Finanzmarktstabilisierung (SoFFin), which, among other things, authorized up to €80 billion ($107 billion) in capital injections.[121] Ultimately, only €29 billion ($40 billion) was expended on capital injections into four banks, with more than half of that amount going to Commerzbank.[122]

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[119] The relationship between the U.K. program and the CPP is discussed in Section E.1, *infra.*

[120] International Monetary Fund, *Updated Stocktaking of the G–20 Responses to the Global Crisis: A Review of Publicly Announced Programs for the Banking System,* at 7 (Sept. 3, 2009) (online at www.imf.org/external/np/g20/pdf/090309b.pdf).

[121] *See* Federal Agency for Financial Market Stabilisation, *Fund for the Stabilization of the Financial Market Starts Its Operations in Germany* (Oct. 27, 2008) (online at www.soffin.de/en/press/press-releases/2008/20081027_press_release_soffin.html). *See also* Federal Agency for Financial Market Stabilisation, *The Formation* (online at www.soffin.de/en/soffin/objectives/the-formation/) (accessed Aug. 10, 2010); Federal Agency for Financial Market Stabilisation, *Financing* (online at www.soffin.de/en/soffin/financing/) (accessed Aug. 10, 2010).

[122] *See* Federal Agency for Financial Market Stabilisation, *Stabilisierungsmabnahmen des SoFFin* (June 30, 2010) (online at www.soffin.de/de/soffin/leistungen/massnahmen-aktuell/index.html) (in German). *See also* Commerzbank, *Term Sheet: SoFFin* (Dec. 19, 2008) (online at www.commerzbank.com/media/aktionaere/vortrag/2008/081219_SoFFin_Term-Sheet.pdf). SoFFin's investments typically took the form of interest bearing hybrid securities termed "silent participation," as well as, in some cases, a stake in voting common equity. For example, Commerzbank received a total of €16.9 ($23 billion) billion in hybrid securities, in several tranches, bearing an interest rate of 9 percent, which the bank has so far been unable to pay. These securities were later made convertible to common equity. *See* Commerzbank, *Commerzbank and SoFFin Agree on Loan Programme for Mittelstand (SME)* (Dec. 18, 2008) (online at www.commerzbank.com/en/hauptnavigation/presse/archiv_/presse_mitteilungen/2008/quartal_08_04/presse__archiv__detail_08_04_4919.html). *See also* James Wilson, *Commerzbank Prepares for Withdrawal of State Support,* Financial Times (May 20, 2010) (online at

Another, similar example is France's State Shareholding Corporation (SPPE).[123] Established on October 20, 2008, this government-owned entity purchased significant amounts of securities in large banks such as BNP Paribas, Société Générale, and Credit Agricole S.A. (Credit Agricole), in two separate rounds of recapitalization.[124] Unlike the CPP, where the shares were directly held by Treasury, SPPE was set up as a corporation (société anonyme), with the government as the sole shareholder. SPPE was itself controlled by a preexisting government agency, the Government Shareholding Agency (APE), which also controls government investments in many other sectors of the French economy, such as telecom, airports, and defense.[125] France's long history with state-owned enterprises (entreprises publiques) made it possible for the government to use a preexisting framework to address the unprecedented situation of the 2008 financial crisis. SPPE imposed a number of "behavioral commitments" on participating banks, including lending targets and limits on severance payments for executives.[126]

The government of the United Kingdom was another notable user of capital injections through its Bank Recapitalisation Scheme (BRS), which was instituted on October 8, 2008 as part of a larger package of stability measures.[127] This £50 billion ($87 billion) program was designed to boost Tier 1 capital at British banks. Unlike the CPP, however, the British government set a target for new capital to be raised by participating banks. Those banks could then either raise the capital on their own from private investors, or from funds provided by the government in exchange for preferred and

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www.ft.com/cms/s/0/bc23dc62-63a6-11df-a32b-00144feab49a.html). The German government later purchased €1.8 billion ($2.4 billion) in common equity as well, giving it a 25 percent plus 1 share stake in the bank. These shares were purchased at near market value and did not cause significant dilution of the bank's private shareholders. Commerzbank, *Annual General Meeting 2009 Approves Capital Increase to Allow for SoFFin Participation* (May 16, 2009) (online at www.commerzbank.com/en/hauptnavigation/presse/archiv__/presse__mitteilungen/2009/quartal_09_02/presse_archiv_detail_09_02_5662.html). Conversion of the silent participation securities, however, which has been mentioned as a possible government exit strategy, would result in substantial dilution. SoFFin conditioned its investment on compensation limits for the Commerzbank's board. This cap was recently renewed until the bank becomes current on its debt service on the government investment. Commerzbank, *Commerzbank Invites for Annual General Meeting on May 19, 2010* (Mar. 31, 2010) (online at www.commerzbank.com/en/hauptnavigation/presse/archiv__/presse__mitteilungen/2010/quartal_10_01/presse_archiv_detail_10_01_6773.html).

[123] Officially the "Société de Prise de Participation de l'Etat."

[124] SPPE investments were deeply subordinated perpetual hybrid debt securities known as *Titres Subordonnés Souscrits* (TSS). TSS bear a two-phase interest rate—a fixed rate for the first 5 years, upon which the security converts to variable rate. In the case of Société Generale, SPPE's investment was in non-convertible preferred stock, which did not differ greatly in effect from the TSS. Because none of these investments were convertible, SPPE's capital injections were not dilutive to common equity holders. The additional debt service burden created by the TSS put pressure on the participating banks' profits, however. There is no evidence that the SPPE forced changes in the management or board membership of participating banks. *See* Letter from Neelie Kroes, commissioner for competition policy, European Commission, *Capital-Injection Scheme for Banks,* at 3, 4–6 (Dec. 8, 2008) (online at ec.europa.eu/competition/state_aid/register/ii/doc/N-613-2008-WLWL-en-08.12.2008.pdf) (hereinafter "Capital-Injection Scheme for Banks"). *See also* Mayer Brown, *Summary of Government Interventions in Financial Markets: France,* at 1–2 (Sept. 8, 2009) (online at www.mayerbrown.com/publications/article.asp?id=7847&nid=6).

[125] APE, the Agence de Participations de l'Etat, was formed in 2003. It was specifically designed to separate the conflicting roles the government assumes in its relationship with state-owned corporations, as a shareholder, a customer, and a regulator. As a purely shareholding entity, APE avoids the appearance of conflicts of interest and promotes transparency. *See* Agence De Participations De L'Etat, *The Missions of the Government Shareholding Agency (APE)* (online at www.ape.minefi.gouv.fr/sections/qu_est_ce_que_1_ape/) (accessed Aug. 10, 2010).

[126] Capital-Injection Scheme for Banks, *supra* note 124, at 8–10.

[127] Financial Support to the Banking Industry, *supra* note 62.

common stock.[128] Although this program, mentioned earlier in Section C.1.a, was open to all banks within the United Kingdom as well as U.K. subsidiaries of foreign banks, the government's focus was on eight large and systemically significant banks.[129] All eight of these banks participated in the program in the sense of raising the requisite capital. Only two of Britain's largest banks, Royal Bank of Scotland and Lloyds TSB, actually took the government funds, totaling £37 billion ($65 billion).[130]

The British government emphasized that the Bank Recapitalisation Scheme was designed to provide maximum protection for the taxpayer. This was highlighted by the Prime Minister at the time, Gordon Brown, who contrasted the British approach with the initial TARP plan for asset purchases.[131] Even after the United States switched to a strategy of capital injections, there were substantial differences between the countries' approaches. Unlike the CPP, which was designed to be attractive to banks in order to maximize participation, the BRS imposed a number of rigorous conditions on participating banks, including, among other things, lending targets.[132]

Although most countries tended to focus on assisting their own domestic banks, in certain cases, several countries jointly contributed capital to a troubled bank.[133] A notable example occurred on September 28, 2008 when the governments of Belgium, Netherlands, and Luxembourg purchased a 49 percent stake in Fortis N.V./S.A. (Fortis), a large bank and insurance company, for €16.4

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[128] Mayer Brown, *Summary of Government Interventions in Financial Markets: United Kingdom,* at 1 (Sept. 8, 2009) (online at www.mayerbrown.com/public_docs/0363fin-Summary_of_Government_Interventions_UK_2col.pdf).

[129] The eight large British financial institutions were: Abbey; Barclays; HBOS; HSBC Bank plc; Lloyds TSB; Nationwide; RBS; and Standard Chartered.

[130] Arguably, three banks took government funds, since Lloyds' funding was conditioned on a successful merger with HBOS. HBOS shareholders therefore indirectly benefited from the government funds provided to Lloyds. *See* Jodie Ginsberg and Steve Slater, *UK Bank Bail-Out to Take Big Stakes in Top Banks,* Reuters (Oct. 13, 2008) (online at www.reuters.com/article/idUSTRE49C1LQ20081013). The nature of the government investments in these firms was unlike most other capital injection programs, such as the CPP. In the case of RBS, the Government acted as the underwriter for a £15 billion ($26 billion) common equity offering that would be made available to existing RBS Shareholders at a fixed price of 65.5 pence per share (RBS was trading at around 50–60 pence after a precipitous drop over the prior weeks). Only 0.24 percent of the new shares were purchased by shareholders, leaving the remainder to be purchased by the government at 65.5 pence per share. Additionally, the government subscribed for 5 billion ($8.5 billion) in convertible preferred shares ("preference shares" in British parlance) bearing a 12 percent coupon. Both of these transactions were highly dilutive to existing shareholders. The Lloyds/HBOS investment was similarly structured to the RBS investment, and similarly dilutive to existing shareholders. See House of Commons, *Treasury—Seventh Report Banking Crisis: Dealing With the Failure of the UK Banks,* at Section 3, paragraphs 133–146 (Apr. 21, 2009) (online at www.parliament.the-stationery-office.co.uk/pa/cm200809/cmselect/cmtreasy/416/41606.htm).

[131] Landon Thomas Jr. and Julia Werdigier, *Britain Takes a Different Route to Rescue Its Banks,* New York Times (Oct. 9, 2008) (online at www.nytimes.com/2008/10/09/business/worldbusiness/09pound.html) (hereinafter "Britain Takes a Different Route to Rescue Its Banks").

[132] The Bank Recapitalization Scheme lending targets have not been successfully met. *See, e.g.,* Kathryn Hopkins, *Banks Fail to Meet Targets to Increase Lending to Small Business,* The Guardian (Apr. 1, 2010) (online at www.guardian.co.uk/business/2010/apr/01/banks-fail-lending-business-targets). Nevertheless, these targets were recently increased by the new coalition government. Jill Treanor, *Coalition Plans New Lending Targets for Bailed-Out Banks,* The Guardian (June 27, 2010) (online at www.guardian.co.uk/business/2010/jun/27/coalition-plans-bank-lending-targets). Lending targets of this sort, also employed by France, Austria, and the Netherlands, have been criticized by some, such as the Institute of International Finance, a global banking trade group, as being protectionist and destabilizing to credit flows. Peter Foster, *Government Lending Targets for Bail-Out Banks Feed Protectionism, Warns IIF,* The Telegraph (June 11, 2009) (online at www.telegraph.co.uk/finance/economics/5505726/Government-lending-targets-for-bail-out-banks-feed-protectionism-warns-IIF.html).

[133] International cooperation during the financial crisis is discussed in Section E, *infra.*

billion ($23.9 billion).[134] Despite a long history of cooperation between these three countries, the subsequent sale of Fortis to BNP Paribas was delayed and complicated by opposition from Belgian shareholders, highlighting the difficulties individual national concerns present in international rescue efforts.[135]

The EU, through the European Central Bank (ECB), used capital injections as one of the strategies it pursued to assist banks in member countries. On May 7, 2009, the European Central Bank began the Covered Bond Purchase Programme to purchase eligible Euro-denominated corporate bonds as a way of injecting additional capital into the financial system, particularly banks.[136] This program concluded on June 30, 2010 after being used to purchase €60 billion ($83.5 billion) in bonds.[137] ECB documents indicate that the ECB believed the program helped reduce euro zone covered bond spreads significantly, and thus lowered the cost of capital raised using these instruments.[138]

Japan had considerable experience with capital injections over the past two decades, and brought this experience to bear in the recent financial crisis. Beginning in 1997, the Japanese government injected over ¥10 trillion ($116 billion in today's dollars) in new capital into the Japanese banking system in two separate tranches. These injections were accomplished either by purchasing preferred shares or, more commonly, through subordinated debt.[139] Some observers consider these actions to have been successful overall.[140] In 2004, the Japanese government passed the Financial Functions Strengthening Act, which provided a procedure for future capital injections.[141] The Deposit Insurance Corporation of Japan (DIC) began using this new authority in late 2006 with capital injections to two banks, Kiya Bank and Howa Bank Limited. Beginning in March 2009, DIC began a series of capital injections to 11 banks, in the form of convertible preferred shares.[142] Due to

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[134] Fortis Bank, *Annual Report 2008: Fortis Bank NV/SA,* at 10 (Apr. 9, 2009) (online at www.fortisbank.com/en/press/media/UK_FBBE_Annual_report_2008_20042009.pdf).

[135] IMF Proposed Framework for Enhanced Coordination, *supra* note 33, at 13.

[136] Mayer Brown, *Summary of Government Interventions in Financial Markets: European Central Bank (and the Eurosystem),* at 3 (May 26, 2009) (online at www.mayerbrown.com/public_docs/ 0287fin-Interventions_ECB.pdf).

[137] This currency conversion uses the average historical exchange rate during the 420 days from the program's inception to completion.

[138] *See, e.g.,* European Central Bank, *Monthly Report on the Eurosystem's Covered Bond Purchase Programme, May 2010,* at 1 (June 2010) (online at www.ecb.int/pub/pdf/other/monthlyreporteurosystemcoveredbondpurchaseprogramme201006en.pdf).

[139] *See also* April Oversight Report, *supra* note 2, at 55–60.

[140] *See, e.g.,* Heather Montgomery and Satoshi Shimizutani, *The Effectiveness of Bank Recapitalizations in Japan,* at 12 (June 2005) (online at hi-stat.ier.hit-u.ac.jp/research/discussion/2005/pdf/D05-105.pdf). This research paper examines the effect of Japanese capital injections on international and regional bank behavior, specifically on regulatory capital strength, total lending, lending to small businesses, and loan write-offs. In summary, the authors found that the second round of capital injections (1998–99), which was more company specific in structure than the first, was particularly effective. The authors partially credit this to a requirement that participating banks submit a restructuring plan that outlined how the capital would be used. *See also* Richard Koo, *The Age of Balance Sheet Recessions: What Post-2008 U.S., Europe and China Can Learn from Japan 1990–2005* (Oct. 2009) (online at www.imf.org/external/am/2009/pdf/APDKoo.pdf).

[141] *See* Mizuho Financial Group, Inc., *Form 20–F for Fiscal Year Ended March 31, 2009,* at 33 (Aug. 19, 2009) (online at www.sec.gov/Archives/edgar/data/1335730/000119312509177855/d20f.htm).

[142] Deposit Insurance Corporation of Japan, *Capital Injection* (online at www.dic.go.jp/english/e_katsudou/e_katsudou3.html) (accessed Aug. 10, 2010); Deposit Insurance Corporation of Japan, *List of Capital Injection Operations Pursuant to the Financial Functions Strengthening Act* (online at www.dic.go.jp/english/e_katsudou/e_katsudou3-2.html) (accessed Aug. 10, 2010).

their convertible nature, these capital injections were potentially dilutive to existing shareholders.

Overall, capital injections were a common government response during the initial weeks and months of the financial crisis. The example of the TARP certainly encouraged the use of capital injections, although there were many variations both in the manner in which the capital was provided, and the consequences of the capital injection to the company and its investors.[143]

b. Nationalizations

In certain instances, governments went beyond capital injections, completely or effectively nationalizing ailing financial institutions. The term "nationalization" can be used to cover a wide array of possible actions, from the government purchase of a majority stake in a private firm as a passive investor to putting a failed bank into receivership for liquidation. This section will generally disregard the latter, as this strategy is not a new response to the recent financial crisis, and is usually simply a mechanism for conducting an orderly bankruptcy, rather than an extraordinary government takeover of a private enterprise. In certain cases, however, it is difficult to draw a strict distinction between a bank liquidation and nationalization.

The U.S. federal government's placement of Fannie Mae and Freddie Mac into conservatorship on September 8, 2008, as well as the acquisition of 80 percent of insurance giant AIG on September 16, 2008, have been termed "nationalization" by some, in the latter case notably by former AIG CEO Maurice "Hank" Greenberg.[144] The federal government has not characterized these actions as nationalization, however, likely due to the negative connotations of the term in the United States. Other nations, including most European nations, had no such compunction about calling similar actions nationalization.

The U.K. takeover of Northern Rock, one of the U.K.'s largest banks at the time, is perhaps the best known nationalization of a bank in the financial crisis. During the summer of 2007, ongoing problems with U.S. subprime mortgages caused a severe contraction in the money markets, as banks became increasingly wary of lending to one another. Beginning in September 2007, the Bank of England made loans and provided other assistance to Northern Rock, which had been unable to refinance its maturing debts. The news of this support prompted a brief run on the bank, which was only halted by promises of asset guarantees by the U.K. Treasury. Despite this assistance, the company's need for capital kept grow-

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[143] During the summer of 2010, the Committee of European Banking Supervisors stress tested 91 European banks. The tested banks comprised 65 percent of the European banking sector by assets. These tests used an approach similar to that used in the 2009 U.S stress tests, discussed in the Panel's June 2009 Report. Congressional Oversight Panel, *June Oversight Report: Stress Testing and Shoring Up Bank Capital,* at 6–26 (June 9, 2009) (online at cop.senate.gov/documents/cop-060909-report.pdf) (hereinafter "June Oversight Report"). Results of the tests were announced on July 23, 2010, and are available online. *See* Committee of European Banking Supervisors, *2010 EU Wide Stress Testing* (July 2010) (online at www.c-ebs.org/EuWideStressTesting.aspx). These stress tests are also discussed in Section E.1.b, *infra.*

[144] Mark E. Ruquet, *Greenberg Pans AIG "Nationalization",* National Underwriter Life and Health (Sept. 18, 2008) (online at www.lifeandhealthinsurancenews.com/News/2008/9/Pages/Greenberg-Pans-AIG-Nationalization-.aspx). For an extensive review of the AIG rescue, *see* June Oversight Report, *supra* note 10.

ing. By February 2008, the government's potential liabilities from Northern Rock totaled more than £100 billion ($196 billion).

Unable to find a buyer for Northern Rock, the government announced it was nationalizing the bank on February 17, 2008.[145] After a lengthy arbitration process, it was determined that former Northern Rock shareholders should not be compensated.[146] The nationalized Northern Rock shares were held by UK Financial Investments Ltd., a publicly owned firm that would allow the government to remain a passive investor. Nevertheless, sweeping changes were instituted at Northern Rock, including a new board of directors, many layoffs, a merger with another nationalized bank, a split into a "good bank" and a "bad bank," and the sale or transfer of many assets, including much of the mortgage book. Although the nationalization was controversial, the company has recovered somewhat and expects to repay the government loan by the end of 2010.[147]

Another example of nationalization was Germany's takeover of Hypo Real Estate AG (HRE), a major mortgage lender. After over €80 billion ($107 billion) in loan guarantees by the German government failed to solve HRE's substantial financial problems, the government, through SoFFin, made a €2.9 billion ($4.1 billion) offer to purchase 90 percent of the firm, which was accepted on June 2, 2009.[148] This offer closely followed the passage of a new expropriation law on April 9, 2009.[149] On June 8, 2009, using the provisions of the new law, SoFFin demanded that the remaining shares be turned over to it.[150] After much dispute with the minority shareholders over this "squeeze-out," particularly with the American private equity firm J.C. Flowers, HRE was finally fully acquired by SoFFin on October 5, 2009.[151] The government did not remove the HRE's CEO, presumably because he had joined HRE in October

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[145] *See* The Nationalization of Northern Rock, *supra* note 46, at 23. This report contains numerous criticisms of the British government's handling of the Northern Rock situation, and puts the estimated taxpayer losses at between £2 and £10 billion ($3 to $14 billion).

[146] Prior to nationalization, Northern Rock had over 190,000 shareholders. In 2008, the British Treasury appointed an independent "valuer" to determine what compensation these shareholders should receive. The valuer ultimately determined that Northern Rock shares were worthless if the £25 billion ($40 billion) government loan was subtracted from Northern Rock's pre-nationalization value. This decision not to grant any compensation caused considerable controversy among former shareholders, many of whom disputed the valuer's assumptions and methodology. Northern Rock, *Independent Valuation Under the Northern Rock PLC Compensation Scheme Order 2008: Consultation Document December 2009* (Dec. 2009) (online at www.northernrockvaluer.org.uk/media/uploads/page_contents/downloadables/Consultation%20Document%20December%202009.pdf). *See generally* Northern Rock, *Northern Rock Valuer's Website* (online at www.northernrockvaluer.org.uk/default.aspx) (accessed Aug. 10, 2010).

[147] *See* Northern Rock, *Update on State Aid Approval Process for Northern Rock* (June 26, 2009) (online at companyinfo.northernrock.co.uk/investorRelations/news/viewFeedarticle.aspx?id=169296873417676); BBC News, *Northern Rock Confirms Split Plan* (June 26, 2009) (online at news.bbc.co.uk/2/hi/business/8121517.stm).

[148] Hypo Real Estate Group, *Hypo Real Estate Shareholders Approve Capital Increase* (June 2, 2009) (online at www.hyporealestate.com/eng/pdf/02062009_PI-HV_2009_Englisch_Endfassung.pdf).

[149] Mayer Brown, *Summary of Government Interventions in Financial Markets: Germany,* at 1–3 (Sept. 8, 2009) (online at www.mayerbrown.com/publications/article.asp?id=7848&nid=6).

[150] *Id.* at 5.

[151] Hypo Real Estate Group, *HRE General Meeting Passes Resolution on the Squeeze-Out of Minority Shareholders* (Oct. 5, 2009) (online at www.hyporealestate.com/eng/pdf/PI-aO_Hauptversammlung_englisch_Endfassung.pdf). For explanation of the J.C. Flowers dispute, *see, e.g.,* Carter Dougherty, *J.C. Flowers Has No Allies in Battle Over Hypo Real Estate,* The New York Times (Apr. 27, 2009) (online at www.nytimes.com/2009/04/28/business/global/28hypo.html).

2008 and was not held responsible for the company's condition.[152] Although this takeover may have saved a major lender from bankruptcy, HRE remains an extremely weak company. Despite being under complete government ownership for over a year, HRE was the only German bank to fail the recent EU bank stress tests.[153]

The 2008 financial crisis had a greater impact on Iceland's economy than that of any other nation. Following the collapse of Glitnir Bank (Glitnir), the Icelandic government announced on September 28, 2008 that it would nationalize the bank through purchase of a 75 percent equity stake for the equivalent of $875 million.[154] Within days, however, the government decided to cancel the purchase and put the insolvent bank directly into receivership, as well as NBI hf (Landsbanki) and Kaupthing Bank (Kaupthing), the two other large banks in the country.[155] These institutions were divided into "old" and "new" banks—essentially a bad bank-good bank strategy—with the latter designed to be viable businesses without the burden of the distressed assets of the former banks.[156] The CEOs of Kaupthing and Landsbanki resigned upon takeover, presumably under government pressure. The CEO of Glitnir was asked to stay on, but has since resigned.[157] Iceland is still in the process of resolving these and other banks in receivership.

c. Expanded Deposit Insurance

Deposit insurance schemes provide a safety net that maintains depositor confidence in the solvency of banks and discourages bank runs by small, uninformed depositors. Insured depositors are protected against the consequences associated with the failure of a bank, thereby relieving them of the difficult task of monitoring and assessing the health of their financial institution in order to ensure the security of their savings. Insurance levels are typically capped under the assumption that larger depositors are better informed and thus better able to exert discipline on banks. A trusted deposit insurance scheme can be particularly valuable in times of crisis when market participants of all sizes find it difficult to distinguish between illiquid and insolvent financial institutions or to gauge the level of implicit government support for the financial sector. In the fall of 2008, most developed economies expanded their deposit in-

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[152] *See* Hypo Real Estate AG, *Supervisory Board Appoints New Members to the Management Board of Hypo Real Estate Holding AG* (Oct. 13, 2008) (online at www.hyporealestate.com/eng/pdf/20081007_19.15_Ad.Hoc_eng.pdf).

[153] The European stress tests are discussed in Section E.1.b, *infra.*

[154] Tasneem Brogger and Helga Kristin Einarsdottir, *Iceland Drops Glitnir Purchase; Bank in Receivership,* Bloomberg (Oct. 8, 2008) (online at noir.bloomberg.com/apps/news?pid=newsarchive&sid=a9KS9N9H_GLw&refer=home%5D).

[155] Ministry of Justice and Ecclesiastical Affairs (Iceland), *Announcement: Decision of the Financial Supervisory Authority on the Appointment of a Receivership Committee for GlitnirmBank hf,* The Legal Gazette (Oct. 7, 2008) (online at www.fme.is/lisalib/getfile.aspx?itemid=5671).

[156] Financial Supervisory Authority of Iceland, *Annual Report 2009,* at 12 (June 11, 2010) (online at www.fme.is/lisalib/getfile.aspx?itemid=7294).

[157] Glitnir's press release archive does not cover the period prior to October 2008. Several press accounts have mentioned that the CEO was requested to stay. *See, e.g.,* David Teather, *Banking Crisis: Iceland Takes Control of Glitnir,* The Guardian (Sept. 29, 2008) (online at www.guardian.co.uk/business/2008/sep/29/icelandiceconomy.banking). In any event, the CEO remained at Glitnir for several months after nationalization. Though Glitnir did not announce his departure, a new CEO has since been appointed. *See, e.g.,* Glitnir, *New CEO of Glitnir Bank* (Aug. 5, 2009) (online at www.glitnirbank.com/home/198-new-ceo-of-glitnir-bank.html).

surance schemes to avoid further destabilization as a result of bank runs.[158]

According to the International Association of Deposit Insurers, 99 countries had explicit deposit insurance schemes in operation at the onset of the financial crisis.[159] In the fall of 2008, "47 jurisdictions acted to strengthen their deposit insurance systems in response to the crisis."[160]

In the United States, language in EESA temporarily raised the ceiling on FDIC deposit insurance from $100,000 per depositor per bank to $250,000.[161] The increase became permanent with the enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act on July 21, 2010.[162] In addition, two weeks prior to the passage of EESA, Treasury responded to a broad-based run on money market mutual funds triggered by the collapse of Lehman Brothers by creating the Temporary Guarantee Program for Money Market Funds (TGPMMF). TGPMMF provided a guarantee to investors in all participating money market funds that the value of their investment would not drop below $1.00 per share.[163] After two extensions, the TGPMMF expired on September 18, 2009.[164]

The first foreign government to expand its deposit insurance scheme was Ireland. On September 20, 2008, Ireland's Minister of Finance announced that the Irish government would increase its insurance limit from €20,000 ($29,000) to €100,000 ($143,000).[165] On September 30, only hours after the U.S. House of Representatives surprised financial markets by failing in its initial attempt to pass financial stability legislation, Ireland went a step further, passing an emergency law authorizing an unlimited temporary guarantee arrangement safeguarding all deposits and debts with its six major banks for two years.[166]

This unilateral decision to guarantee deposits of any size raised concerns among other EU countries and the European Commissioner for Competition Policy that Ireland was distorting the market by providing its banks with a competitive advantage.[167] Re-

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[158] Sebastian Schich, *Financial Crisis: Deposit Insurance and Related Financial Safety Net Aspects,* OECD Journal: Financial Market Trends, Vol. 2008/2, No. 95, at 12–21 (2008) (online at www.oecd.org/dataoecd/36/48/41894959.pdf).

[159] International Association of Deposit Insurers, *2007/2008 Annual Report,* at 15 (2008) (online at www.iadi.org/annual_reports/IADI_AnnualReport_low.pdf). In addition to the 99 deposit insurance schemes in operation, another 8 were pending, and 12 were planned or under study as of March 2008.

[160] International Association of Deposit Insurers, *2008/2009 Annual Report: Charting a Course Through a Global Crisis,* at 1 (2009) (online at www.iadi.org/annual_reports/AnnualReport08_09.pdf).

[161] *See* 12 U.S.C. § 5241(a)(1).

[162] *Dodd-Frank Wall Street Reform and Consumer Protection Act,* Pub. L. No. 111–203, at § 335 (2010) (hereinafter "Dodd-Frank Wall Street Reform and Consumer Protection Act").

[163] *See* November Oversight Report, *supra* note 68, at 27–35.

[164] *See* U.S. Department of the Treasury, *The Next Phase of Government Financial Stabilization and Rehabilitation Policies,* at 46 (Sept. 2009) (online at www.treas.gov/press/releases/docs/Next%20Phase%20of%20Financial%20Policy,%20Final,%202009-09-14.pdf).

[165] *Credit Institutions (Financial Support) Act of 2008* (No. 18 of 2008) (Oct. 2, 2008) (online at www.irishstatutebook.ie/2008/en/act/pub/0018/print.html).

[166] The six banks covered by the guarantee were Allied Irish Bank, Bank of Ireland, Anglo Irish Bank, Irish Life and Permanent, Irish Nationwide Building Society, and the Educational Building Society. Department of Finance (Ireland), *Government Decision to Safeguard Irish Banking System* (Sept. 30, 2008) (online at www.finance.gov.ie/documents/pressreleases/2008/blo11.pdf) (hereinafter "Government Decision to Safeguard Irish Banking System").

[167] *See* Neelie Kroes, commissioner for competition policy, European Comission, Speech Before the Economic and Monetary Affairs Committee, European Parliament, *Dealing with the Current Financial Crisis* (Oct. 6, 2010) (online at europa.eu/rapid/

Continued

ports of an exodus of deposits from U.K. banks to Irish banks led the U.K.'s Financial Services Authority (FSA), on October 3, to increase its compensation limit for bank deposits from £35,000 ($61,834) to £50,000 ($88,335) on individual claims and up to a maximum of £100,000 ($176,670) for joint accounts.[168] The United Kingdom also found itself in the position of guaranteeing the deposits of Icesave, an online branch of the failed Icelandic bank Landsbanki, which catered to British citizens.[169] The Icesave guarantee was an unusual case of a bank being rescued by a foreign government.[170] It highlights the difficulties in effectively dealing with globalized financial institutions, especially those headquartered in small nations, such as Iceland, which lack the economic capacity to rescue large firms themselves.

The lack of an initial coordinated EU approach to deposit insurance expansion underscored the potential adverse spillover effects of adjusting national deposit insurance in a globalized economy.[171] This problem is magnified in the European Economic Area (EEA) where member states observe a "single passport" system that permits financial services operators legally established in one member state to operate in the other member states without further authorization requirements. Under a European Commission directive adopted in 1994 that sets minimum standards for deposit insurance, all EEA members must establish a deposit insurance scheme with minimum coverage of €20,000 ($27,000 in today's dollars) per depositor. Deposits in banks that use the passport system to establish branches or subsidiaries in other EEA member states are covered by the deposit insurance scheme of the bank's home state.[172] As the United Kingdom found in the case of the Icelandic bank Landsbanki, this arrangement can cost the host state in the event that the bank's home state deposit insurance scheme is unwilling or unable to protect depositors.[173]

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pressReleasesAction.do?reference=SPEECH/08/498&format=HTML&aged=0&language=EN&guiLanguage=en).

[168] Financial Services Authority (U.K.), *Compensation Scheme to Cover Savers' Claims Up to* £50,000 (Oct. 3, 2008) (online at www.fsa.gov.uk/pages/Library/Communication/PR/2008/114.shtml) (hereinafter "FSA Press Release—Compensation Scheme").

[169] Financial Services Authority (U.K.), *Icesave—Statement to Customers* (Oct. 8, 2010) (online at www.fsa.gov.uk/pages/consumerinformation/firmnews/2008/icesavestatementcustomers_.shtml).

[170] Similar rescues of local subsidiaries of Icelandic banks were implemented by the Netherlands. *See, e.g.,* Netherlands—De Nederlandsche Bank (DNB), *Press Release: DNB Activates Deposit Guarantee Scheme for Savers at Icesave* (Oct. 9, 2008) (online at www.dnb.nl/en/news-and-publications/news-and-archive/persberichten-2008/dnb189090.jsp).

[171] *See, e.g.,* Larry Elliott, Miles Brignall, and Henry McDonald, *Savers in Stampede to Safety,* The Guardian (Oct. 2, 2008) (online at www.guardian.co.uk/politics/2008/oct/02/alistairdarling.ireland); British Bankers Association, *BBA Statement on Irish Guarantee* (Oct. 1, 2008) (online at www.bba.org.uk/bba/jsp/polopoly.jsp?d=1569&a=14580) ("The extent of the guarantee has clear consequences for firms competing to win retail deposits and, while we support proposals aimed at re-introducing stability to the financial markets, we need fair play for financial institutions across Europe.").

[172] European Parliament and the Council of the European Union, *Directive 94/19/EC of the European Parliament and of the Council of 30 May 1994 on Deposit-Guarantee Schemes,* at Art. 4(1) (May 30, 1994) (online at eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31994L0019:EN:HTML). Pursuant to Article 4(1) of 94/19/EC, "[d]eposit-guarantee schemes introduced and officially recognized in a Member State in accordance with Article 3(1) shall cover the depositors at branches set up by credit institutions in other Member States." Thus, for example, depositors in branches of Irish banks located in the United Kingdom are covered by the Irish deposit insurance scheme. In the event that the host country that the foreign branch is operating in has a higher coverage limit than that bank's home country, the host country must allow the bank to buy into its insurance scheme in order to cover the difference. *Id.* at Art. 4(2).

[173] Icesave was an internet branch of Landsbanki, an Icelandic bank with an EEA passport. Icesave had "topped up" into the U.K.'s Financial Services Compensation Scheme (FSCS), mean-

On October 4, 2008, French Prime Minister and then-acting EU President Nicolas Sarkozy hosted a summit with leaders from Germany, the United Kingdom, and Italy to discuss a coordinated response to the crisis. The four nations criticized Ireland for issuing a unilateral deposit guarantee without first consulting with its EU partners. A statement from the German Chancellor's office stated that Ireland's move "forced London in turn to raise its own bank guarantees to prevent a stampede to transfer savings from the United Kingdom to Ireland."[174] A day later, German Chancellor Angela Merkel and Finance Minister Peer Steinbrück provided a verbal guarantee of all private bank deposits in German banks.[175] Numerous other EU member states, including Greece, Austria, Denmark, and Sweden, followed suit in the first week of October before the EU Economic and Financial Affairs Council announced an agreement among all EU members to raise the minimum level of deposit guarantee protection to €50,000 ($68,000) for an initial period of at least one year.[176] The agreement was formalized by an amendment to the deposit insurance directive proposed by the European Commission in mid-October and passed by the European Parliament in March 2009.[177] The amendment called for an increase of deposit insurance to €50,000 ($63,000)[178] by June 30,

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ing that Iceland's Depositors' and Investors' Guarantee Fund (IDIGF) was liable for the first €20,887 ($28,765) of any claim, and the FSCS was liable for any amount above that up to the U.K. limit, of £50,000 ($87,805) at the time. *See* Financial Services Authority (U.K.), *Financial Risk Outlook 2009,* at 19 (Feb. 2009) (online at www.fsa.gov.uk/pubs/plan/financial_risk_outlook_2009.pdf). As discussed in Section C.1.b, on October 6, 2008, Iceland adopted emergency legislation authorizing the nationalization of its three largest banks, including Landsbanki, all of which had lost the ability to refinance their liabilities in international capital markets. The Icelandic government announced it would guarantee all domestic deposits at these institutions, but was non-committal as to how depositors in foreign branches would be treated. The United Kingdom stepped in to cover these deposits in order to maintain confidence in the British banking system. *See* United Kingdom Financial Services Compensation Scheme (FSCS), *Determination: FSCS Accelerated Compensation for Depositors Instrument 2008 (Landsbanki Islands hf)* (Nov. 4, 2008) (online at www.fscs.org.uk/industry/determinations/icesave/). The IDIGF agreed to reimburse the United Kingdom for the amounts paid out to eligible depositors of the Icesave accounts up to €20,887 ($28,765) per depositor, totaling approximately £2.4 billion ($4 billion). However, as a result of the financial crisis, the IDIGF has limited resources at this time, so a loan agreement was reached to satisfy the IDIGF's debt (guaranteed by the government of Iceland) to the United Kingdom. The terms of the loan are still awaiting approval from the Icelandic Parliament and President. *See* Prime Minister's Office (Iceland), *Press Release: Iceland Negotiations Concluded—Outcome Presented* (Oct. 18, 2009) (online at eng.forsaetisraduneyti.is/news-and-articles/nr/4008); *Acceptance and Amendment Agreement Relating to a Loan Agreement Dated 5 June 2009 Between The Depositors' and Investors' Guarantee Fund of Iceland and Iceland and The Commissioners of Her Majesty's Treasury* (Oct. 19, 2009) (online www.althingi.is/pdf/icesave/01-AAA-UK.pdf); IceNews, *EFTA Extends Iceland Icesave Deadline* (July, 24, 2010) (online www.icenews.is/index.php/2010/07/24/efta-extends-iceland-icesave-deadline/).

[174] Office of the German Federal Chancellor, *Confidence Must Be Restored in Financial Markets* (Oct. 5, 2008) (online at www.bundeskanzlerin.de/nn_704284/Content/EN/Archiv16/Artikel/2008/10/2008-10-04-g4-paris-finanzmarkt__en.html).

[175] *Id.* ("We tell all savings account holders that your deposits are safe. The federal government assures it.").

[176] Council of the European Union, *Press Release: 2894th Council Meeting, Economic and Financial Affairs* (Oct. 7, 2008) (www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/103250.pdf).

[177] European Parliament and the Council of the European Union, *Directive 2009/14/EC of the European Parliament and of the Council of 11 March 2009 Amending Directive 94/19/EC on Deposit Guarantee Schemes as Regards the Coverage Level and the Payout Delay,* at Art. 1 (Mar. 11, 2009) (online at ec.europa.eu/internal_market/bank/docs/guarantee/200914_en.pdf) (hereinafter "Amendment to Deposit Insurance Directive").

[178] The discrepancy in the euro-to-dollar conversions between the time of the announced agreement and formal adoption of the amendment results from a drop in the value of the euro relative to the dollar during this period.

2009 and harmonization of coverage levels at €100,000 ($126,000) by December 31, 2010.[179]

Outside Europe, the most significant deposit insurance policy responses to the crisis occurred in Australia and New Zealand. Before the crisis began, Australia and New Zealand were two of the only major developed economies with no deposit insurance schemes at all, instead favoring rigorous supervisory regimes to maintain confidence in their banking sectors. On October 12, 2008, the two countries made coordinated announcements of new deposit insurance policies. Australia introduced a guarantee of deposits of up to $1 million AUD ($644,000) in Australian-owned banks, locally incorporated subsidiaries of foreign banks, credit unions, and building societies for a period of three years.[180] New Zealand introduced an opt-in deposit scheme covering retail deposits at banks and non-bank deposit taking entities for two years.[181] Hong Kong and Singapore followed later that same week with two-year suspensions of the deposit coverage limit in their existing insurance schemes.[182]

d. Central Bank Liquidity and Other Programs

Board of Governors of the Federal Reserve System

The actions undertaken by the Federal Reserve can largely be classified into four groups:[183]

- **Provision of Short-term Liquidity to Banks.** Through programs such as the Primary Dealer Credit Facility (PDCF), the Term Securities Lending Facility (TSLF), and the Term Auction Facility (TAF), which were established in late 2007 and early 2008, the Federal Reserve acted in its role as lender of last resort and to provide liquidity to banks and other depository institutions.
- **Provision of Liquidity to Borrowers and Investors.** The Money Market Investor Funding Facility (MMIFF), the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), the Commercial Paper Funding Facility (CPFF), and the Term Asset-Backed Securities Loan Facility (TALF), which were established in the fall of 2008, provided liquidity to market participants.
- **Purchase of Long-term Securities.** As the liquidity facilities that had been established to face the crisis were wound down, the Federal Reserve expanded its facilities for purchasing mortgage related securities. The Federal Reserve purchased $175 billion of federal agency debt securities and $1.25 trillion

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[179] Amendment to Deposit Insurance Directive, *supra* note 177, at Art. 1.

[180] Office of Australian Deputy Prime Minister and Treasurer Wayne Swan, *Government Announces Details of Deposit and Wholesale Funding Guarantees* (Oct. 24, 2008) (online at www.treasurer.gov.au/DisplayDocs.aspx?doc=pressreleases/2008/117.htm&pageID=003&min=wms&Year=&DocType=).

[181] Reserve Bank of New Zealand, *Deposit Guarantee Scheme Introduced* (Oct. 12, 2008) (online at www.rbnz.govt.nz/news/2008/3462912.html).

[182] Hong Kong Monetary Authority, *Press Release: Financial Secretary Announces New Measures to Support Confidence in the Hong Kong Banking System* (Oct. 14, 2008) (online at www.info.gov.hk/hkma/eng/press/2008/20081014e6_index.htm); Ministry of Finance and Monetary Authority of Singapore, *Joint Press Statement* (Oct. 16, 2008) (online at www.mas.gov.sg/news_room/press_releases/2008/MOF_and_MAS_Joint_Press_Statement.html).

[183] For additional details on these programs, see Annex I, *infra*.

of agency mortgage-backed securities by the end of March 2010.[184]

- **Institution-Specific Assistance.** In March 2008, the Federal Reserve provided $28.8 billion in funding to Maiden Lane LLC—a special purpose vehicle (SPV) created to purchase mortgage-backed securities from Bear Stearns in order to facilitate the merger between that company and JPMorgan Chase. In the fall of 2008, through the creation of two additional SPVs—Maiden Lane II and III—as well as a revolving credit facility, the Federal Reserve committed up to $137.5 billion to AIG.[185] Finally, in late 2008 and early 2009, the Federal Reserve, along with Treasury and the FDIC, participated in ring-fence guarantees of $118 billion for Bank of America[186] and $301 billion for Citigroup.[187]

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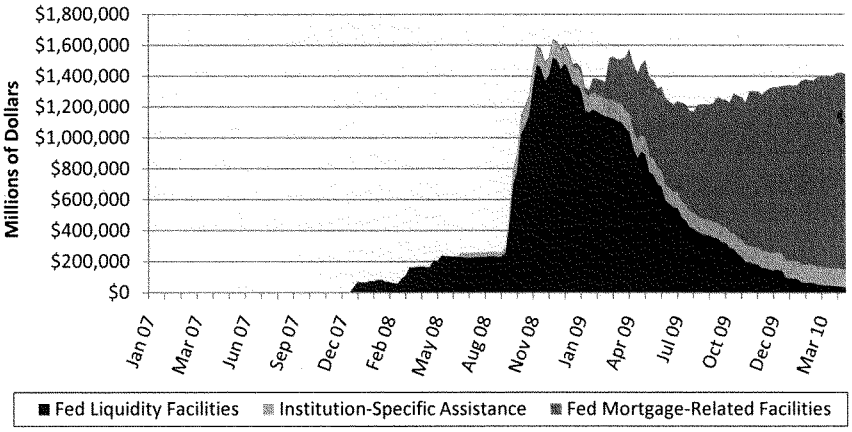
[184] Board of Governors of the Federal Reserve System, *Minutes of the Federal Open Market Committee,* at 10 (Dec. 15–16, 2009) (online at www.federalreserve.gov/newsevents/press/monetary/fomcminutes20091216.pdf) ("[T]he Federal Reserve is in the process of purchasing $1.25 trillion of agency mortgage-backed securities and about $175 billion of agency debt.").

[185] This figure is composed of the $85 billion revolving credit facility and the maximum loans to Maiden Lane II and III of $22.5 billion and $30 billion, respectively.

[186] As defined by Treasury, a "ring-fencing" is the segregation of certain assets from the rest of a financial institution's balance sheet in order to address problems with the assets in isolation. U.S. Department of the Treasury, *Decoder* (Sept. 18, 2009) (online at www.financialstability.gov/roadtostability/decoder.htm). While a Provisional Term Sheet was drafted reflecting the outlines of Bank of America's asset guarantee agreement, the parties never agreed upon a finalized term sheet. Even though no agreement had been memorialized in writing and the parties were still negotiating certain terms (i.e., there was no explicit guarantee), the parties negotiated a fee to compensate the government upon Bank of America's decision to terminate ongoing negotiations surrounding the unfinalized guarantee. Pursuant to the Bank of America Termination Agreement, Bank of America made payments of $276 million to Treasury, $57 million to the Federal Reserve, and $92 million to the FDIC. U.S. Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Bank of America Corporation, *Termination Agreement,* at 1–2 (Sept. 21, 2009) (online at www.financialstability.gov/docs/AGP/BofA%20-%20Termination%20Agreement%20-%20executed.pdf).

[187] In the case of this agreement, Treasury, the FDIC, and the Federal Reserve placed guarantees, or assurances, against losses on pools of certain assets owned by Citigroup. As consideration for the guarantee, Citigroup issued Treasury with $4.034 billion face value of preferred stock and warrants to purchase 66,531,728 shares of common stock at a strike price of $10.61. The FDIC was issued $3.025 billion in preferred stock. *Master Agreement Among Citigroup Inc., Certain Affiliates of Citigroup Inc. Identified Herein, Department of the Treasury, Federal Deposit Insurance Corporation and Federal Reserve Bank of New York* (Jan. 15, 2009) (online at www.financialstability.gov/docs/AGP/Citigroup_01152009.pdf). Upon the termination of the guarantee, Citigroup canceled $1.8 billion of the $7 billion in AGP Preferred that Citigroup had issued to Treasury and the FDIC as consideration. The $5.259 billion in trust preferred securities retained reflects a $1.8 billion reduction since the loss-sharing agreement was terminated after one year. Treasury will incur the $1.8 billion haircut initially, but will receive up to $800 million of the Citigroup trust preferred securities currently held by the FDIC, provided that Citigroup repays its outstanding debt issued under the FDIC's TLGP. As part of the termination fee, Citigroup also paid $50 million to the Federal Reserve Bank of New York. U.S. Department of the Treasury, *Citigroup Termination Agreement* (Dec. 23, 2009) (online at www.financialstability.gov/docs/Citi%20AGP%20Termination%20Agreement%20-%20Fully%20Executed%20Version.pdf).

FIGURE 14: FEDERAL RESERVE'S CRISIS RESPONSE [188]



European Central Bank (ECB)

The ECB has characterized its crisis response as being centered upon three building blocks. The first was the expansion of liquidity through the adaptation of the ECB's regular refinancing operations. The ECB adopted what it called a "fixed rate full allotment" tender process. In normal times the ECB would auction a set amount of central bank credit with one-week maturity and let the market demand determine the price. Under the "fixed rate full allotment" method, the ECB was willing to fill any liquidity shortage at the interest rate it set itself for maturities up to six months. Therefore, the ECB acted as a "surrogate for the market in terms of both liquidity allocation and price-setting." [189] The second building block of the ECB's response was the expansion of the list of assets it took as collateral. The final building block was the inclusion of a large number of additional counterparties that were eligible to participate in the refinancing operations. Prior to the crisis, 1,700 counterparties were eligible to participate; by April 2009, 2,200 credit institutions in the Euro area met the criteria to refinance through the ECB. Finally, the ECB announced its intention to purchase $80.5 billion in euro-denominated covered bonds.[190]

Bank of England (BoE)

On April 21, 2008 the BoE announced its Special Liquidity Scheme, which allowed banks to swap certain mortgage-backed and other securities for UK Treasury Bills.[191] In October 2008, the BoE

[188] Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release: Factors Affecting Reserve Balances: Data Download Program* (online at www.federalreserve.gov/DataDownload/Choose.aspx?rel=CP) (accessed Aug. 10, 2010).

[189] Jean-Claude Trichet, president, European Central Bank, Speech at the University of National and World Economy, *The Financial Crisis and the Response of the EC* (June 12, 2009) (online at www.ecb.int/press/key/date/2009/html/sp090612.en.html).

[190] Jean-Claude Trichet, president, European Central Bank, and Lucas Papademos, vice president, European Central Bank, *Introductory Statement with Q&A* (May 7, 2009) (online at www.ecb.int/press/pressconf/2009/html/is090507.en.html).

[191] Bank of England, *News Release: Special Liquidity Scheme* (Apr. 21, 2008) (online at www.bankofengland.co.uk/publications/news/2008/029.htm).

established a permanent Discount Window Facility, providing banks with access to long-term liquidity. In response to the worsening financial conditions, the BoE announced the creation of an asset purchase facility on January 19, 2009. Under this program, which was similar to the U.S. Asset Guarantee Program, the BoE was initially authorized to make purchases of up to €50 billion ($66 billion) of corporate bonds, syndicated loans, commercial paper, and certain types of ABS.[192] The British central bank eventually purchased €200 billion ($276 billion)[193] in assets and, as of June 8, 2010, has announced that the program will remain on hold.

Bank of Japan

The Bank of Japan responded to the financial crisis primarily through asset purchases. On January 22, 2009, the Bank of Japan announced its intention to purchase up to 3 trillion yen of commercial paper (including asset-backed commercial paper).[194] The Bank of Japan resumed its purchases of bank stocks on February 3, 2009 with the announcement that it had committed an additional 1 trillion yen to the program.[195] The Japanese central bank also committed 1 trillion yen toward the creation of a subordinated loan program.[196]

Swiss National Bank (SNB)

The SNB announced on October 15, 2008 that it would begin to issue its own debt—SNB Bills—in order to absorb excess liquidity in the financial system. On March 12, 2009, the SNB announced its intention to purchase foreign currency against the Swiss Franc and Swiss Franc bonds in order to halt its rapid appreciation.[197] Finally, the SNB and the Swiss government financed an effort to rescue Switzerland-based bank UBS. Along with other steps taken by the Swiss government, the SNB provided financing of up to $54 billion dollars against an equity contribution made by UBS of up to $6 billion to an entity created solely to purchase troubled assets from UBS.[198]

e. Guarantees and Purchases of Impaired Assets

European governments both guaranteed and purchased impaired assets. In contrast, in the United States, guarantees of impaired

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[192] HM Treasury, *Statement on Financial Intervention to Support Lending in the Economy* (Jan. 19, 2009) (online at www.hm-treasury.gov.uk/press_05_09.htm) (hereinafter "HM Treasury Statement on Financial Intervention").

[193] This currency conversion uses the average historical exchange rate during the 570 days from the program's inception to its suspension.

[194] Bank of Japan, *Outright Purchases of Corporate Financing Instruments* (Jan. 22, 2009) (online at www.boj.or.jp/en/type/release/adhoc09/un0901b.pdf).

[195] This was a continuation of a program that began in 2002. As of September 2008 the Bank of Japan held 1.27 trillion yen of bank stocks. Bank of Japan, *The Bank of Japan to Resume Stock Purchases Held by Financial Institutions* (Feb. 3, 2009) (online at www.boj.or.jp/en/type/release/adhoc09/fss0902a.pdf).

[196] Bank of Japan, *Provision of Subordinated Loans to Banks* (Mar. 17, 2009) (online at www.boj.or.jp/en/type/release/adhoc09/fsky0903a.htm). Each bank was limited to a maximum of 350 billion yen and both loan amounts and interest rates for the loans were determined by a quarterly auction. The program ended new disbursements at the close of March 2010. Bank of Japan, *Establishment of "Principal Terms and Conditions for Provision of Subordinated Loans"* (Apr. 10, 2009) (online at www.boj.or.jp/en/type/release/adhoc09/fsky0904a.pdf).

[197] Swiss National Bank, *Monetary Policy Assessment of 12 March 2009* (Mar. 12, 2009) (online at www.snb.ch/en/mmr/reference/pre_20090312/source/pre_20090312.en.pdf).

[198] Swiss Federal Department of Finance, *Federal Council Takes Decision on Measure to Strengthen Switzerland's Financial System* (Oct. 16, 2008) (online at www.efd.admin.ch/dokumentation/medieninformationen/00467/index.html?lang=en&msg-id=22019).

assets played a significant role in the rescue,[199] but purchases of such assets did not, despite the fact that the TARP was initially envisioned as a purchase program.[200] One problem with asset purchases is the difficulty of setting prices for the transactions. If the prices are set at market levels, then the purchases lock in bank losses, and are likely to reveal banks as unacceptably weak. If the purchases are made at par, they represent direct subsidies to the banks and their shareholders—subsidies potentially so large in the U.S. case as to exceed the scale of the TARP.

i. Guarantees of Assets and Debt

Liability guarantees quickly spread through Europe amidst concerns that banks covered by guarantees enjoyed a competitive advantage over banks without comparable resources. Beginning in September 2008, European and Canadian bank regulators introduced a series of liability guarantees aimed at preventing bank runs and managing threats to real estate prices caused by wounded financial services providers that were deemed too big to fail. The guarantees took various forms, ranging from highly targeted approaches tailored to support a few large banks (an approach taken in the United States)[201] to widespread measures pledging hundreds of billions of Euros for bank recapitalization plans and loan guarantee initiatives. Explicit guarantees, such as the backstops in the United States for the government sponsored enterprises and Citigroup, are associated with more risk than the implicit guarantees that helped other CPP recipients raise funds and repay TARP loans quickly.[202]

In the United States, the FDIC's Temporary Liquidity Guarantee Program, announced in October 2008, introduced new debt and transaction account guarantee programs aimed at boosting interbank lending and safeguarding some accounts in excess of deposit limits.[203] In late 2008, the Federal Reserve Board and the FDIC guaranteed more than $301 billion of Citigroup assets.[204]

The most extensive foreign guarantees were orchestrated by a handful of European countries and bore numerous similarities. From September 2008 to October 2008, Germany, France, and the United Kingdom introduced sizeable backstops for a handful of large financial institutions. Belgium, France, Luxembourg, and Germany collectively established €200 billion ($287 billion) of guarantees to support Dexia Group S.A. (Dexia) and HRE, respectively.[205] These guarantees were introduced on a standalone basis and were kept separate from distinct plans that raised a combined total of €720 billion of far-reaching guarantees in both countries.[206]

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[199] November Oversight Report, *supra* note 68.

[200] Congressional Oversight Panel, *Accountability for the Troubled Asset Relief Program: The Second Report of the Congressional Oversight Panel,* at 15–16 (Jan. 9, 2009) (online at cop.senate.gov/documents/cop-010909-report.pdf).

[201] November Oversight Report, *supra* note 68, at 13–40.

[202] November Oversight Report, *supra* note 68, at 7.

[203] FDIC Announces Plan to Free Up Bank Liquidity, *supra* note 63.

[204] November Oversight Report, *supra* note 68, at 6.

[205] Dexia SA, *Annual Report 2008,* at 10 (Apr. 20, 2008) (online at www.dexia.com/docs/2009/2009_AG/annual_report/20090513_RA_corporate_UK.pdf); Hypo Real Estate Group, *Annual Report 2008,* at 37 (Apr. 24, 2009) (online at www.hyporealestate.com/eng/pdf/AR2008_09_04_24_final_GL.pdf) (hereinafter "Annual Report 2008").

[206] *Id.* at 220; Sullivan & Cromwell LLP, *French Bank Relief Act* (Oct. 20, 2008) (online at www.sullivanandcromwell.com/files/Publication/df0f1dd1-b716-40e9-bd9d-77f99c5cc3b9/Presen-

Germany arguably executed Europe's most extensive deployment of guarantees. Its guarantees included short-term assurances for covered bonds and commitments to shore up vulnerable money market funds. Germany's multifaceted approach also involved stalled initial efforts to broker a collaborative rescue effort between the public and private sector. HRE, Germany's second-largest commercial property and commercial finance lender at the height of the crisis, received an initial €35 billion ($51 billion) emergency line of guaranteed financing in September 2008 and two separate €15 billion ($19 billion) financing guarantees the following month.[207]

SoFFin, the bank rescue fund established on October 17, 2008 by the German Financial Market Stabilisation Act, provided approximately €62 billion ($81 billion)[208] of guarantees for Bayerische Landesbank (BayernLB), IKB, HRE, and HSH Nordbank AG between November 2008 and March 2009.[209] SoFFin later approved a one-year extention of Hypo's rescue package starting in December 2009. Hypo also received a €52 billion ($77 billion) extension on guarantees from SoFFin that was scheduled to end in June 2010.[210]

Italy and Canada took a more concentrated approach that made guarantees available to their respective banking sectors without establishing guarantees for specific financial institutions. Implicit guarantees extended through the Canadian Lenders Assurance Facility, which provided insurance on wholesale term borrowing of federally regulated deposit-taking institutions for six months beginning October 23, 2008.[211] The underlying stability of Canada's banking system contributed to a climate in which commercial lending institutions neither recapitalized nor drew down on government bank funding guarantees.[212] Italy took a different approach by enacting a series of laws between November 27, 2008 and January 29, 2009. The legislation was aimed at creating new resources for oversight bodies, such as the Ministry for the Economy and Finance, which gained the ability to guarantee capital increases for banks identified as undercapitalized by the Bank of Italy.[213]

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tation/PublicationAttachment/5d0a7d25-18f4-41c9-a019-7842c8dd4fdf/SC_Publication_French_Bank_Relief_Act.pdf) (hereinafter "Summary of French Bank Relief Act").

[207] Annual Report 2008, *supra* note 205, at 37.

[208] This currency conversion uses the average historical exchange rate during the 121 days between this period.

[209] BayernLB, *A New Direction for BayernLB: Bank to Concentrate on Core Activities* (Dec. 1, 2008) (online at www.bayernlb.de/internet/ln/ar/sc/Internet/en/Downloads/0100_CorporateCenter/1323Presse_Politik/Pressemeldungen/2008/12Dezember/01122008NewBusinessmodel.pdf); IKB Deutsche Industriebank, *Ad-hoc Announcement Pursuant to Sec. 15 of the German Securities Trading Act: IKB Receives Guarantees from the Special Fund for the Stabilization of the Financial Market* (Dec. 22, 2008) (online at www.ikb.de/content/en/ir/news/ad_hoc_announcements/All/081222_SoFFin_englisch.pdf); HSH Nordbank AG, *SoFFin Approves HSH Nordbank Business Model* (Mar. 7, 2009) (online at www.hsh-nordbank.com/en/presse/pressemitteilungen/press_release_detail_194560.jsp).

[210] Hypo Real Estate Holding AG, *Annual Report for Year Ended 2009,* at 24 (Mar. 26, 2010) (online at www.hyporealestate.com/eng/pdf/AR09_HRE_10_03_25_19_45_GL.pdf).

[211] Canadian Department of Finance, *Government of Canada Strengthens Canadian Advantage In Credit Markets* (Oct. 23, 2008) (online at www.fin.gc.ca/n08/08-080-eng.asp).

[212] Lev Ratnovski Lev and Rocco Huang, *Why Are Canadian Banks More Resilient?,* International Monetary Fund Working Paper, at 3 (July 2009) (WP/09/152) (online at www.imf.org/external/pubs/ft/wp/2009/wp09152.pdf).

[213] DLA Piper, *Summary of the Italian Rescue Plan to Stabalise the Financial Markets* (Jan. 23, 2009) (online at www.dlapiper.com/files/upload/

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In a combined public-private rescue not replicated in other jurisdictions, on July 11, 2008, the Danish National Bank granted an unlimited liquidity facility to Roskilde Bank, and a private association of nearly all the banks in Denmark provided a guarantee on losses of DKK 750 million ($158 million) on the liquidity facility, with further losses guaranteed by the Danish government.[214]

The United Kingdom also employed guarantees that took shape as targeted rescue efforts and broader stabilization measures. After providing a stream of liquidity facilities and guarantees beginning in November 2007 to Northern Rock, the U.K. introduced a credit guarantee scheme in October 2008.[215] HM Treasury initially announced up to £250 billion ($437 billion) of guarantees for new short and medium-term debt issuance to help banks recapitalize in conjunction with a separate recapitalization scheme.[216] This program initially offered guarantees to the entire range of extended-collateral operations at banks that subscribed to the program. As the crisis deepened, in December 2008 HM Treasury extended the credit guarantee scheme's deadline to 2014 from 2012 and lowered participation fees charged to banks.[217] A few weeks later, the goverment extended the drawdown window of its credit guarantee scheme to December 31, 2009 from April 9.[218] During the drawdown window, banks could issue new debt, and continue rolling all of it over until April 13, 2012, and up to a third of the total amount over the next two years.

The UK introduced its Asset Protection Scheme (APS) in January 2009 to help banks protect capital from further erosion. The scheme guaranteed certain types of assets, such as commercial and residential property loans or structured credit assets from eligible banks with at least £25 billion ($37 billion) in assets in exchange for a fee.[219] Lloyds entered into a relationship with APS in March 2009 due to its previous purchase of Halifax Bank of Scotland Group Plc, which regulators believed held significant troubled assets. Lloyds placed £260 billion ($369 billion) with APS and negotiated a 4 percent fee that amounted to £10 billion ($14 billion). During this time Lloyds was careful to avoid handing British taxpayers a 60 percent stake, which could have occurred if the government's £4 billion ($6 billion) of preference shares were converted into ordinary equity. To this end, Lloyds improved its position with a £13.5 billion ($22 billion) rights issue and raised an additional £7.5 billion ($12 billion) by swapping existing debt for contingent capital. The capital raise paid off and Lloyds was allowed to exit APS in November 2009.[220] The exit relieved the British govern-

%205087723_1_UKGROUPS(EMEA%20Govt%20Rescue%20Plan%20-%20Italy%20-%209%20Feb%2009).PDF).

[214] See discussion in Section C.1.a, *supra*.

[215] *See* HM Treasury, *Revised Spring Supplementary Estimates, 2008–09* (Feb. 2009) (online at www.hm-treasury.gov.uk/d/springsupps0809_hmt.pdf); FSA Press Release—Compensation Scheme, *supra* note 168; Financial Support to the Banking Industry, *supra* note 62.

[216] Financial Support to the Banking Industry, *supra* note 62.

[217] HM Treasury, *Changes to Credit Guarantee Scheme* (Dec. 15, 2008) (online at www.hm-treasury.gov.uk/press_138_08.htm).

[218] HM Treasury Statement on Financial Intervention, *supra* note 192.

[219] HM Treasury, *Statement on the Government's Asset Protection Scheme* (Jan. 19, 2009) (online at www.hm-treasury.gov.uk/press_07_09.htm) (hereinafter "HM Treasury Statement on the Asset Protection Scheme").

[220] HM Treasury, *Implementation of Financial Stability Measures for Lloyds Banking Group and Royal Bank of Scotland* (Nov. 3, 2009) (Notice 99/09) (online at www.hm-treasury.gov.uk/

ment of a potential liability of up to 90 percent of £260 billion ($262 billion).

France participated in one of the largest guarantee programs targeting an individual bank by providing slightly more than 36 percent of a €150 billion ($204 billion) rescue for Dexia SA. Belgium and Luxembourg covered the remaining balance.[221] On October 13, 2008, French President Nicolas Sarkozy announced plans to provide up to €320 billion ($429 billion) of loan guarantees that were available through year end 2009.[222] The guarantees covered loans for up to five years.

Ireland employed a different variation that created guarantees for six of its largest banks at once. The initial offer, which applied to Allied Irish Banks plc (Allied Irish Bank), Bank of Ireland Group (Bank of Ireland), Anglo Irish Bank Corporation (Anglo Irish Bank), Irish Life and Permanent Plc (Irish Life and Permanent), Irish Nationwide Building Society and the Educational Building Society, was initially structured to wind down in two years.[223]

Japan was the only G–7 member that addressed its banking problems without implementing significant liability guarantees.

ii. Asset Purchases

Asset purchases were another tool that governments used during the crisis, both to deal with problematic assets on bank balance sheets and in some countries as a way to loosen the monetary supply.

In the United States, the Public-Private Investment Program (PPIP), announced by Treasury in 2009,[224] was initially designed to use up to $100 billion of TARP dollars and private capital to facilitate private purchases of legacy loans and securities. The program aimed to generate up to $500 million in purchasing power for legacy assets under a partnership between the government and private sectors. Some potential investors were also offered non-recourse loans as an incentive to purchase non-agency residential asset backed mortgage securities and commercial mortgage backed securities. Treasury's August 6, 2010 TARP transaction report indicates a $22.4 billion final investment amount for PPIP.[225] Treasury has scaled back the program's scope from a larger initial budget.[226]

As discussed earlier in Section C.2.d, the Federal Reserve purchased roughly $1.25 trillion of agency mortgage-backed securities between January 2009 and March 2010. The Federal Reserve also purchased up to $300 billion of longer-term U.S. Treasury securities over a period of several months. In addition, Treasury pur-

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press_99_09.htm) (hereinafter "HM Treasury Notice—Lloyds Banking Group and Royal Bank of Scotland").

[221] Official Journal of the European Union, *Procedures Relating to the Implementation of the Competition Policy,* at 43 (Apr. 8, 2009) (online at www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:181:0042:0044:EN:PDF).

[222] Summary of French Bank Relief Act, *supra* note 206.

[223] Government Decision to Safeguard Irish Banking System, *supra* note 166.

[224] U.S. Department of the Treasury, *Treasury Department Releases Details on Public-Private Partnership Investment Program* (Mar. 23, 2009) (online at www.ustreas.gov/press/releases/tg65.htm).

[225] Treasury Transactions Report, *supra* note 64, at 22.

[226] Congressional Oversight Panel, *January Oversight Report: Exiting TARP and Unwinding Its Impact on the Financial Markets,* at 105 (Jan. 13, 2010) (online at cop.senate.gov/documents/cop-011410-report.pdf) (hereinafter "January Oversight Report").

chased approximately $220 billion in agency mortgage-backed securities under a program that ended December 31, 2009.[227]

The United Kingdom introduced a £50 billion ($73 billion) asset purchase plan on January 19, 2009,[228] which was increased to £75 billion ($106 billion) on March 5, 2009,[229] and increased again to £125 billion ($188 billion) on May 7, 2009.[230] U.K. officials soon added provisions within the facility to purchase commercial paper and corporate bonds as a means of injecting liquidity into the credit markets. Other purchases included medium and long-maturity conventional U.K. Treasury bonds traded on the secondary market. Regulators also added a secured working paper facility to help keep short-term borrowing options solvent.[231] When output and other vital economic indicators failed to show signs of recovery, the program's ceiling was raised to £200 billion ($330 billion) from £175 billion ($289 billion) on November 5, 2009.[232] The asset purchase program coincided with a decision of the United Kingdom's Monetary Policy Committee on March 5, 2009 to engage in quantitative easing and reduce the Bank Rate to 0.50 percent. The asset purchase program was a critical part of this operation.[233] To make the scheme work, the Bank of England provided liquidity to inject capital into commercial banks by purchasing various public and private sector assets. The purchases were an instrumental part of restoring liquidity to credit markets and assisting borrowers by pushing down interest rates tied to yields.[234]

Under the U.K. plan, various assets were purchased under different pricing schemes. As an example, the plan included a commercial paper facility that acquired assets directly from companies or market participants trading outstanding inventory. The latter group was charged an additional fee. Eligible commercial paper had a minimum maturity of three months, an investment-grade rating and issuance from non-bank companies. As of May 21, 2009 the program had accumulated £2.25 billion ($3.6 billion) of commercial paper, roughly a third of the available stock. Corporate bonds were acquired through reverse auctions from financial institutions that functioned as market makers. The format was chosen to ensure banks would pay the lowest possible prices for assets.

Ireland introduced an innovative asset purchase scheme that enabled its largest banks to transfer up to €90 billion ($119.1 billion) into a newly created entity known as the National Asset Manage-

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[227] U.S. Department of the Treasury, *Treasury Issues Update on Status of Support for Housing Programs* (Dec. 24, 2009) (online at www.ustreas.gov/press/releases/2009122415345924543.htm).

[228] HM Treasury Statement on Financial Intervention, *supra* note 192.

[229] Bank of England, *Bank of England Reduces Bank Rate by 0.5 Percentage Points to 0.5% and Announces £75 Billion Asset Purchase Programme* (Mar. 5, 2009) (online at www.bankofengland.co.uk/publications/news/2009/019.htm).

[230] Bank of England, *Bank of England Maintains Bank Rate at 0.5% and Increases Size of Asset Purchase Programme by £50 Billion to £125 Billion* (May 7, 2009) (online at www.bankofengland.co.uk/publications/news/2009/037.htm).

[231] Bank of England, *Asset Purchase Facility: Secured Commercial Paper* (June 8, 2009) (online at www.bankofengland.co.uk/markets/apf/securedcpf/index.htm).

[232] Bank of England, *Bank of England Maintains Bank Rate at 0.5% and Increases Size of Asset Purchase Programme by £25 Billion to £200 Billion* (Nov. 5, 2009) (online at www.bankofengland.co.uk/publications/news/2009/081.htm).

[233] James Benford et al., *Quantitative Easing,* Bank of England Quarterly Bulletin (Q2 2009) (www.bankofengland.co.uk/publications/quarterlybulletin/qb090201.pdf).

[234] *Id.*

ment Agency (NAMA).[235] NAMA stated that Ireland's banks "will be cleansed of risky categories of loans at a price that is less than their current value on the banks' balance sheets."[236] The transactions were financed by the issuance of government bonds. NAMA announced the transfer of its first tranche of loans from Allied Irish Banks on April 6, 2010. In the transaction NAMA acquired loans with a face value of €3.29 billion ($4.44 billion) in exchange for NAMA securities valued at €1.9 billion ($2.56 billion), resulting in a 42 percent discount after taking account of foreign exchange movements.[237] The initial transfers also included a €670 million ($903.8 million) purchase of loans from Irish Nationwide Building Society for €280 million ($377.7 million) of NAMA securities, a 58 percent discount.

f. Changes in Accounting Rules

Government assistance to financial firms was not limited to outside sources of capital or guarantees; another tool involved the amendment of existing fair value accounting rules, which sometimes require changes to an institution's reported financial statement position without a corresponding change in actual assets or liabilities. The use of this tool proved to be politically charged and resulted in intense and continuing debates between regulatory authorities and accounting standard-setters in both the United States and Europe.

The goal of fair value accounting is to estimate the value of assets and liabilities on the balance sheet at their market value; in other words, the amount a seller would receive for an asset or would have to pay to offload a liability in the current market.[238] When market values are readily determinable through actively traded securities and the prices at which debt is issued, fair value accounting may aid in the presentation of some reported assets and liabilities, although the extent to which fair value accounting adds to the understanding of an institution's balance sheet may also depend on the nature of the institution's business. When market values become opaque due to lack of market activity, more subjective methods are used to determine the value of financial instruments.

The SEC, through securities regulations, has empowered the Financial Accounting Standards Board (FASB) to establish accounting standards for the purpose of providing investors with the disclosure of meaningful financial information in a way that is accu-

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[235] National Asset Management Agency, *Annex I—Questions and Answers in Relation to the National Asset Management Agency (NAMA) Initiative,* at 14 (2009) (online at www.nama.ie/Publications/2009/NAMAFrequentlyAskedQuestions.pdf).

[236] *Id.* at 10.

[237] National Asset Management Agency, *National Asset Management Agency—First AIB Loans Transfer* (Apr. 6, 2010) (online at www.nama.ie/Publications/2010/NAMAFirstAIBLoansTransfer.pdf).

[238] Fair value accounting focuses on the exit price of a transaction, valuing it from the seller's perspective, as opposed to the entry price required to purchase the asset or received for assuming the liability. *See* Financial Accounting Standards Board, *Fair Value Measurements and Disclosures—Exit Price,* Topic 820–10–20 (online at asc.fasb.org/glossarysection&trid=2155951%26analyticsAssetName=subtopic_page_section%26nav_type=subtopic_page) (hereinafter "Fair Value Measurements and Disclosures") (accessed Aug. 10, 2010) (Exit Price is defined as "[t]he price that would be received to sell an asset or paid to transfer a liability.").

rate and effective.[239] The users, preparers, and auditors of financial reports are all in the business of decision making: investing or not investing in a company based on the financials, determining the best method of presenting the financial information, and ensuring the accuracy and reliability of the information. To meet the decision-making needs of all users of financial information, FASB established a hierarchy of qualities for accounting information: usefulness, relevance, reliability, comparability, and consistency, countered by the constraints of cost and materiality.[240] Thus, information needs to be both timely and verifiable while also consistent across organizations and without the benefit exceeding the cost of providing the information; therefore, a constant tension exists between requiring too much or too little in a company's disclosures.

Accounting rules have continually expanded in recent years to require fair value reporting for debt and equity securities and derivative transactions, but uniformity in the application and valuation methodology was not established until 2007 with the issuance of Statement of Financial Accounting Standards 157 (SFAS 157).[241] At the time of the financial crisis, fair value accounting in the United States was governed by SFAS 115, which required the classification and reporting of debt securities and equity securities with a readily determinable fair market value,[242] and SFAS 157, which established a hierarchy of fair value measurements to account for assets and liabilities with active markets and those with none.[243] Shortly after the implementation of SFAS 157, however, the finan-

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[239] U.S. Securities and Exchange Commission, *Policy Statement: Reaffirming the Status of the FASB as a Designated Private-Sector Standard Setter* (Apr. 25, 2003) (online at www.sec.gov/rules/policy/33-8221.htm).

[240] Financial Accounting Standards Board, *Statement of Financial Accounting Concepts No. 2: Qualitative Characteristics of Accounting Information,* at 2–4 (May 1980) (online at www.fasb.org/cs/BlobServer?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&blobwhere=1175820900526&blobheader=application%2Fpdf).

[241] On July 1, 2009, U.S. generally accepted accounting principles was replaced by the FASB with the issuance of FASB Accounting Standards Codification (the Codification). SFAS 157 is now referred to as *Fair Value Measurement and Disclosures (Topic 820).* Topic 820 did not change the contents of SFAS 157.

[242] SFAS 115 creates three classification categories: held-to-maturity, trading, and available-for-sale. A debt security is considered held-to-maturity if the enterprise has the positive intent and ability to hold to maturity. These securities are reported at amortized cost and thus, experience no fair value adjustments. Trading securities are debt and equity securities bought and held primarily for the purpose of selling them in the near term. These securities are reported at fair value, with unrealized gains and losses included in earnings. Available-for-sale securities are debt and equity securities not classified in the other two categories. They are reported at fair value, with unrealized gains and losses excluded from earnings and reported in a separate component of shareholders' equity (Accumulated Other Comprehensive Income). While SFAS 115 does not apply to unsecuritized loans, it does apply to mortgage-backed securities. *See* Financial Accounting Standards Board, *Summary of Statement No. 115: Accounting for Certain Investments in Debt and Equity Securities* (May 1993) (online at www.fasb.org/summary/stsum115.shtml); Financial Accounting Standards Board, *Accounting Standards Codification 320–10–25–1* (online at asc.fasb.org/section&trid=2196939%26analyticsAssetName=subtopic_page_subsection%26nav_type=subtopic_page#d3e22050-111558).

[243] SFAS 157 (now referred to as Topic 820) establishes three levels of valuation. Level 1 applies to securities actively trading in an open market (e.g., stocks, active bonds), and requires valuation based on quoted prices in active markets for identical instruments. Level 2 valuation is based on observable, and thus auditable, inputs used to estimate an exit value (e.g., OTC interest-rate swap for which the fair value is based on observable data such as the contract terms and current LIBOR forward rate curve). The final valuation method is Level 3, which applies to securities for which markets do not exist or are illiquid (e.g., CDOs, many derivatives, and stock in unlisted companies), and is based on unobservable inputs and assumptions that usually are employed in a company's internal model to develop a valuation. *See* Fair Value Measurements and Disclosures, *supra* note 238; Financial Accounting Standards Board, *Subsequent Measurement—Fair Value Hierarchy,* Topic 820–10–35–37 (online at asc.fasb.org/section&trid=2155956%26analyticsAssetName=subtopic_page_section%26nav_type=subtopic_page) (accessed Aug. 10, 2010).

cial crisis caused markets to freeze and much activity to cease, which presented a significant problem for a valuation methodology that relies on an open, active, liquid market. Instead, companies relied more strongly on their own assumptions and models, which allowed for greater subjectivity, less comparability across organizations, and the potential for manipulation by the firms' management. In aggregate, as of the first quarter of 2008, S&P 500 financial sector institutions carried 44 percent of their assets at fair value and 13 percent of their liabilities at fair value.[244] For institutions such as commercial banks, the deposit base makes up a substantial portion of the firm's liabilities. Capital market-oriented firms carried approximately 30 percent of their liabilities at fair value. While obtaining readily available market values was complicated by frozen markets, allowing managers to use more judgment in reported losses and write-downs through the use of modeling, it is also possible that managers used market uncertainty as an excuse to avoid a write-down. Fair value accounting required companies to take significant write-downs on assets that, in many cases, triggered regulatory and capital adequacy requirements.[245] Section 133 of EESA mandated that the SEC, in consultation with other regulatory bodies, conduct a study on mark-to-market accounting standards as provided by FASB. After holding public hearings and conducting its own analysis, the SEC ultimately declared that fair value accounting was neither a cause of the financial crisis nor an issue with troubled banks, but that it did need some minor revisions.[246]

Amid pressure from U.S. lawmakers and financial companies such as Citigroup and Wells Fargo & Co, in April 2009 FASB voted to ease fair-value accounting rules during "illiquid" or "inactive" markets.[247] The changes permit companies to use "significant"

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[244] At S&P 500 financial sector companies as of Q1 2008, approximately 44 percent and 13 percent of assets and liabilities, respectively, were recorded at fair value for accounting purposes on the balance sheet. Of these assets and liabilities, approximately 81 percent and 74 percent, respectively, were valued using Level 2 or Level 3 valuation methodology, which are described in note 243, *supra. See* Analysis Group, *Fair Value Accounting: What Lawyers Need to Know* (Oct. 1, 2009) (online at www.securitiesdocket.com/wp-content/uploads/2009/10/Final-Oct1-Fair-Value.pdf) (hereinafter "Analysis Group Presentation on Fair Value Accounting").

[245] This creates a sort of fair value spiral in which asset prices fall. In turn, financial institutions make fair value write-downs and as a consequence balance sheets weaken and regulatory requirements are violated or loan covenants breached. The institution must de-lever by selling assets or raising new equity. Unfortunately, new equity markets dry up, so asset sales becomes the only option. As investment positions are highly correlated across global institutions, the market is imbalanced by a flood of sellers and prices drop further. Due to the supply and demand imbalance, investors with liquidity then step in to buy the assets at bargain prices, and the spiral ends. Analysis Group Presentation on Fair Value Accounting, *supra* note 244.

[246] SEC Study on Mark-to-Market Accounting, *supra* note 94.

[247] Financial Accounting Standards Board, *FASB Staff Position: Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly,* at 4–5 (Apr. 9, 2009) (FSP FAS 157–4) (online at www.fasb.org/cs/BlobServer?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&blobwhere=1175820922722&blobheader=application%2Fpdf). The FASB Staff Position establishes the following eight factors for determining whether a market is not active enough to require mark-to-mark accounting:

1. There are few recent transactions.
2. Price quotations are not based on current information.
3. Price quotations vary substantially either over time or among market makers.
4. Indexes that previously were highly correlated with the fair values of the asset or liability are demonstrably uncorrelated with recent indications of fair value for that asset or liability.
5. There is a significant increase in implied liquidity risk premiums, yields, or performance indicators (such as delinquency rates or loss severities) for observed transactions or quoted prices when compared with the reporting entity's estimate of expected cash flows, considering all available market data about credit and other nonperformance risk for the asset or liability.

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judgment when valuing certain investments in their investment portfolios, which allows for more flexibility in valuing impaired securities. The proposal would apply only to equity and debt securities, though, and FASB staff said that banks should elect to disregard only transactions that are not orderly, i.e., those that occur under distressed circumstances. At the time, some market analysts commented that going forward write-ups could be expected, and these adjustments would ultimately boost bank earnings.[248]

Arthur Levitt, a former SEC Chairman, was critical of the changes. He commented that fair value "provides the kind of transparency essential to restoring public confidence in U.S. markets," and stated that he was deeply concerned about FASB succumbing to political pressures.[249] That said, FASB did not acquiesce to all of the lobbying pressure. The organization rejected a request from banks that would have enabled them to apply fair-value changes retroactively to their 2008 year-end financial statements.

More recently, FASB has sought public comment on a proposal that would require banks to report the fair value of loans on their books, in addition to carrying or book values. Currently, public financial institutions report the fair value of their loans only in footnotes to the quarterly reports to regulators. The American Bankers Association (ABA) has come out against the proposal, arguing that doing so would increase "pro-cyclicality" and ultimately inject volatility into the financial system. Edward Yingling, chief executive officer of the American Bankers Association, said in a statement, "The proposal would greatly undermine the availability of credit by making it difficult to make many long-term loans, the value of which, even if performing perfectly, would likely be reduced on the day a loan is made."[250] Former FDIC Chairman William Isaac has also criticized the proposal, saying that "just by making the proposal, the FASB will lead banks to quit making loans without easily discernable market values and keep the ones they do make to shorter maturities."[251] On the other hand, Sandy Peters, head of the financial reporting policy group at the CFA Institute, an association of investment professionals, commented: "The pro-cyclicality argument is that when you give people information, they act on it. Banks don't like the volatility it presents and what it might do to the share price, but it's still relevant information."[252]

Outside the United States, the International Accounting Standards Board (IASB) has also debated the issue of fair value account-

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6. There is a wide bid-ask spread or significant increase in the bid-ask spread.
7. There is a significant decline or absence of a market for new issuances for the asset or liability or similar assets or liabilities.
8. Little information is released publicly.

Pressure on the FASB mounted when U.S. House Financial Services Committee members urged FASB Chairman Robert Herz at a March 12 hearing to reconsider fair-value methodologies. Less than a week later, FASB's March proposal received further criticism from investor advocates and accounting-industry groups.

[248] Ian Katz, *FASB Eases Fair-Value Rules Amid Lawmaker Pressure,* Bloomberg (Apr. 2, 2009) (online at www.bloomberg.com/apps/news?pid=newsarchive&sid=aMG.2SUJ3Rz4).

[249] *Id.*

[250] Michael J. Moore, *FASB Plan Would Force Banks to Report Loan Fair Value,* Bloomberg Businessweek (May 27, 2010) (online at www.businessweek.com/news/2010-05-27/fasb-plan-would-force-banks-to-report-loan-fair-value-update1-.html) (hereinafter "FASB Plan Would Force Banks to Report Loan Fair Value").

[251] Dakin Campbell, *FASB Plan is "Destructive Idea," Ex-FDIC Chief Says,* Bloomberg Businessweek (May 28, 2010) (online at www.businessweek.com/news/2010-05-28/fasb-plan-is-destructive-idea-ex-fdic-chief-says-update1-.html).

[252] FASB Plan Would Force Banks to Report Loan Fair Value, *supra* note 250.

ing.[253] In October 2008, IASB published educational guidance on the application of fair value measurement when markets become inactive, and, in the face of political pressure from the European Commission (EC),[254] allowed banks to reclassify certain securities as held-to-maturity to allow for reporting at historical, or amortized, cost. The EC effectively forced IASB's hand with this decision, threatening that either asset reclassification be allowed or that the EC would create another "carve out" for international accounting rules. That is, all IASB standards are scrutinized by the European Financial Reporting Advisory Group (EFRAG) established by the EC in 2001. As the aforementioned body would have hindered the potential for an eventual convergence of accounting standards, IASB allowed the asset reclassification, which provided international institutions temporary relief from potential write-downs.[255]

Part of the EU's argument in pushing the IASB to make this change was to better align IFRS with U.S. GAAP. SFAS 115 and SFAS 65 within U.S. GAAP allowed for asset reclassification in specific instances, allowances that have carried over to the current U.S. GAAP codified standards.[256] Originally, International Ac-

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[253] Approximately 120 nations and reporting jurisdictions permit or require International Financial Reporting Standards (IFRS), which are promulgated by IASB, for domestic listed companies, with approximately 90 of those countries fully conformed with IFRS, including the EU. Canada and South Korea are expected to transition to IFRS by 2011; Mexico will require transition for all listed companies in 2012; and Japan is currently debating full adoption of IFRS with potential conversion in 2015 or 2016. American Institute of Certified Public Accountants, *International Financial Reporting Standards FAQs* (online at www.ifrs.com/ifrs_faqs.html) (accessed Aug. 10, 2010). Since 2002, with the support and monitoring of the SEC, FASB and IASB have formally worked towards the mutual goal of convergence of U.S. GAAP and IFRS into a single set of high-quality global accounting standards. Under its current work plan, the SEC plans to make a convergence decision about incorporating IFRS in the financial reporting requirements of U.S. issuers in 2011. *See* U.S. Securities and Exchange Commission, *Commission Statement in Support of Convergence and Global Accounting Standards* (online at www.sec.gov/rules/other/2010/33-9109.pdf) (Release Nos. 33–9109; 34–61578) (accessed Aug. 10, 2010).

[254] The EU has adopted nearly all IFRSs, with limited modifications, or "carve outs." While the EC typically waits on new standards or modifications to come from IASB and then votes on their inclusion in current regulations, in 2008, at the height of the financial crisis, the EC proposed an amendment to IAS 39 (fair value accounting standards) that would allow for the reclassification of assets from trading to held-to-maturity. The EC made this move in case the IASB decided against any changes to the current fair value standard at the time, but the knowledge that an additional "carve out" by the EU would create even more discrepancies within international standards and impede the convergence process put added pressure on the IASB to acquiesce to the EC's proposal. *See* European Commission, *International Accounting Standards and Interpretations Endorsement Process in the EU* (online at ec.europa.eu/internal_market/accounting/docs/ias/endorsement_process.pdf) (accessed Aug. 10, 2010); Huw Jones, *EU Executive to Ease Fair Value on Banks,* Reuters (Oct. 10, 2008) (online at www.reuters.com/article/idUSLA68354320081010).

[255] In the United States, the Securities and Exchange Commission issued a report on this topic. *See* U.S. Securities and Exchange Commission, *Roadmap for the Potential Use of Financial Statements Prepared in Accordance with International Financial Reporting Standards by U.S. Issuers* (Nov. 14, 2008) (online at www.sec.gov/rules/proposed/2008/33-8982.pdf). *See also* Accountancy Age, *Tweedie Nearly Quit After Fair Value Change* (Nov. 12, 2008) (online at www.accountancyage.com/accountancyage/news/2230424/tweedie-nearly-quit-fair-value).

[256] SFAS 115 allowed a security to be reclassified out of the trading category in rare circumstances. SFAS 65 allowed for a loan to be reclassified out of the held-for-sale category if the institution has the intention and ability to hold the loan for the foreseeable future or until maturity. International Accounting Standards Board, *Reclassification of Financial Assets: Amendments to IAS 39 and IFRS 7,* at 10–12 (Oct. 2008) (online at www.iasb.org/NR/rdonlyres/BE8B72FB-B7B8-49D9-95A3-CE2BDCFB915F/0/AmdmentsIAS39andIFRS7.pdf) (hereinafter "Reclassification of Financial Assets: Amendments to IAS 39 and IFRS 7"). The FASB standards have since been codified into a set of standards that allows for more simplified reference and use but did not materially change any prior standards. U.S. standards have remained fairly similar since October 2008, with transfers of assets from held-to-maturity allowed in certain circumstances and those into or from the trading category allowed in rare instances. Sale or transfer of a held-to-maturity security due to the following reasons is not considered inconsistent with the security's original classification: evidence of a significant deterioration in the issuer's credit-

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counting Standard (IAS) 39 disallowed any reclassifications for financial assets classified as held for trading. Although IASB is cognizant that a reclassification under SFAS 115 is extremely rare, it allowed for the amendment to IAS 39 due to the fact that though it is not used in practice, reclassification is at least an option under U.S. GAAP. Thus, the amended IAS 39 allows for reclassifications in similar instances as those allowed under U.S. GAAP. In a dissenting opinion to this amendment, however, IASB members James J. Leisenring and John T. Smith noted that though the playing field may have been leveled in regards to asset reclassification, they believed the original IFRS reclassification rules to be superior to U.S. GAAP and U.S. GAAP to be superior to IFRS in terms of timing and measurement of asset impairment.[257]

Similar to FASB's allowance for more judgment in the use of fair value methodology, IASB issued guidance on measuring fair value in inactive markets, specifically the use of broker or pricing service quotes as inputs as well as internal modeling. Both standard setters have continued to require the use of fair value accounting but emphasize that the objective of fair value measurement is to determine the price at which an orderly transaction would take place, not the price of a distressed sale or liquidation.[258]

3. International Organizations

International organizations—from the G–20 to the IMF to the Financial Stability Board—used their different core competencies to exert significant influence over national policy responses to the financial crisis. The G–20, a forum of finance ministers and central bank governors from 20 systemically significant economies, promotes international economic stability and development through cooperative action between industrial and emerging-market countries.[259] The G–20 was created as a response to the financial crises of the late 1990s and amid a growing understanding that emerg-

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worthiness, tax law change that reduces or eliminates the tax-exempt status of interest on the debt security, major business combination or disposition that requires the sale or transfer of held-to-maturity securities to maintain the entity's interest rate or credit rate risk positions, change in statutory or regulatory requirements significantly modifying what constitutes a permissible investment or maximum number of investments, a significant increase in the industry's capital requirements by the regulator that requires asset divestiture, or a significant increase in the risk weights of debt securities used for regulatory risk-based capital. Financial Accounting Standards Board, *Accounting Standards Codification 320–10–35* (online at asc.fasb.org/section&trid=2196945%26analytics AssetName=subtopic_page_subsection%26nav_type=subtopic_ page#d3e24816-111560) (accessed Aug. 10, 2010); Financial Accounting Standards Board, *Accounting Standards Codification 320–10–25–6* (online at asc.fasb.org/link&sourceid=SL2247003-111560&objid= 6871231) (accessed Aug. 10, 2010).

[257] Reclassification of Financial Assets: Amendments to IAS 39 and IFRS 7, *supra* note 256. U.S. GAAP differs from IFRS in its explicit use of three levels of valuation techniques, while IAS 39 emphasizes using market inputs over internal, firm specific inputs, GAAP recognizes day one profit or loss on fair value even if based on unobservable inputs, whereas IFRS defers day one recognition if fair value measurement is not based on observable inputs. U.S. GAAP and IFRS also differ in slight ways on their fair value treatment of liabilities and equity instruments, as well as disclosure requirements. International Accounting Standards Board and Financial Accounting Standards Board, *Fair Value Measurement Project Update (Agenda Paper 8)* (Mar. 2009) (online at www.iasb.org/NR/rdonlyres/7E90DA08-C957-4B4E-9950-594B57E6D1A5/0/FVM0903joint8obs.pdf).

[258] International Accounting Standards Board, *IASB Expert Advisory Panel: Measuring and Disclosing the Fair Value of Financial Instruments in Markets That are No Longer Active,* at 10 (Oct. 2008) (online at www.iasb.org/NR/rdonlyres/0E37D59C-1C74-4D61-A984-8FAC61915010/0/IASB_Expert_Advisory_Panel_October_2008.pdf).

[259] *See* Group of Twenty, *About G–20* (online at www.g20.org/about_what_is_g20.aspx) (accessed Aug. 10, 2010). G–20 members are: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, the Republic of Korea, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, and the United States.

ing-market countries were not sufficiently represented in global economic discussion and governance.[260] G–20 members are drawn from six continents, and their countries collectively represent approximately 90 percent of the world's gross national product.[261]

In November 2008, the G–20 held the Summit on Financial Markets and the World Economy in Washington, D.C., to "achieve needed reforms in the world's financial system."[262] The G–20 diagnosed the "root causes" of the global crisis, assessed systemic ramifications, and formulated the Action Plan to Implement Principles of Reform.[263] The Plan is based on five "common principles" for reforming financial markets—strengthening transparency and accountability, enhancing sound regulation, promoting integrity in financial markets, reinforcing international cooperation, and reforming international financial institutions—and 47 short- and medium-term actions that leverage the core competencies of international organizations to achieve financial reform.[264]

In April 2009, the G–20 held a London summit to further advance the Action Plan by crafting a declaration that authorized additional measures to promote global financial system reform, including: stronger international frameworks for prudential regulation; greater transparency; more effective regulation of credit rating agencies; and more rigorous regulation and oversight of systemically important financial institutions, markets, and instruments.[265] The G–20 also agreed to support the ability of emerging markets and developing countries to access capital by making significant resource commitments to strengthen global financial institutions, including: tripling the IMF's resources to $750 billion; creating a new Special Drawing Rights allocation of $250 billion that serves as an international reserve asset that supplements countries' official reserves; increasing support for Multilateral Development Bank lending by $100 billion; and providing $250 billion of support for trade finance.[266]

The G–20 also created the Financial Stability Board (FSB) at the April 2009 Summit, as the successor to the Financial Stability Forum (FSF), in order to support the G–20's vision for financial system reform.[267] The FSB's core purpose is to promote international financial reform and stability by coordinating the regulations and policies of national financial authorities and international

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[260] *See id.*

[261] *See id.*

[262] *See* Group of Twenty Washington Summit, *Declaration Summit on Financial Markets and the World Economy,* at 1 (Nov. 15, 2008) (online at www.g20.org/Documents/g20_summit_declaration.pdf).

[263] *See id.* at 1.

[264] *See id.* at 1.

[265] *See* Group of Twenty London Summit, *Declaration on Strengthening the Financial System,* at 1–2 (Apr. 2, 2009) (online at www.g20.utoronto.ca/2009/2009ifi.pdf) (hereinafter "G–20 London Summit Declaration").

[266] *Id. See also* International Monetary Fund, *Fact Sheet: Special Drawing Rights (SDRs)* (Jan. 31, 2010) (online at www.imf.org/external/np/exr/facts/sdr.HTM) ("The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies.").

[267] The FSB has a broader mandate and a larger membership than the FSF, which was created in February 1999. *See* Financial Stability Board, *Financial Stability Board Charter,* at 1–2 (Sept. 13, 2009) (online at www.financialstabilityboard.org/publications/r_090925d.pdf) (hereinafter "FSB Charter"). *See also* G–20 London Summit Declaration, *supra* note 265, at 1.

standard-setting bodies.[268] The FSB seeks to diagnose the weaknesses of the financial system and devise remedies to address them; promote coordination and information exchange among financial authorities; provide regulatory policy advice and counsel; conduct strategic reviews of the policy development work of the international standard setting bodies; set guidelines for supervisory colleges; support contingency planning for cross-border crisis management for systemically important firms; and collaborate with the IMF to conduct Early Warning Exercises.[269] In its September 2009 report, *Improving Financial Regulation,* the FSB issued a comprehensive financial reform program that included guidelines for: strengthening the global capital and liquidity framework for banks; making global liquidity more robust; reducing the moral hazard posed by systemically important financial institutions; strengthening accounting standards; improving compensation practices; and expanding oversight of the financial system.[270]

The IMF has forged a close collaborative relationship with the G–20 and the FSB.[271] The IMF has 187 member countries, and its primary purpose is to "safeguard the stability of the international monetary system."[272] The IMF has assumed an important role in identifying lessons learned from the financial crisis and is relied upon to provide early warning, financial vulnerability, financial soundness, and macro-prudential indicators by gathering and analyzing data through surveillance of individual countries, regions, and the entire world.[273]

As a result of the financial crisis, the IMF has revised its surveillance priorities to increase domestic and cross-border regulation of major financial centers and deepened its analysis of linkages between markets, institutions, exchange rates, and external stability risks.[274] The IMF also created and chaired an interagency group

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[268] *See* FSB Charter, *supra* note 267, at 1–2.

[269] FSB Charter, *supra* note 267. The FSB has taken several steps to attempt to make its operations transparent, but in certain key areas, it remains somewhat opaque. Its charter discloses the general process for determining the membership of its plenary committee, for instance, but the FSB does not list the names and titles of individual representatives. It also states that the "number of seats in the Plenary assigned to Member jurisdictions reflects the size of the national economy, financial market activity and national financial stability arrangements of the corresponding Member jurisdiction," but it fails to provide specific information on the process for making these determinations, nor does it identify the number of seats that were assigned to each member. The charter also provides for standing committees and working groups, but the membership and activities of these entities have not been disclosed. *Id.* at 4. In addition, the FSB provides limited information about the content of plenary committee meetings. It issues press releases after plenary meetings that describe discussion topics and areas of agreement in general terms. *See, e.g.,* Financial Stability Board, *Financial Stability Board Meets on the Financial Reform Agenda* (Jan. 9, 2010) (online at www.financialstabilityboard.org/press/pr_100109a.pdf). However, these press releases are not in the form of minutes, and they include few details about particular issues and concerns raised by specific member countries. Moreover, the FSB does not publish specific agendas in advance of its plenary meetings. The FSB has not yet issued a press release for the plenary committee meeting that occurred on June 14, 2010 in Toronto, even though the meeting occurred approximately two months ago.

[270] *See* Financial Stability Board, *Improving Financial Regulation: Report of the Financial Stability Board to G–20 Leaders* (Sept. 25, 2009) (online at www.financialstabilityboard.org/publications/r_090925b.pdf).

[271] The G–20 has relied on the IMF to provide research and analysis during the crisis. See generally Group of Twenty, *Progress Report on the Economic and Financial Actions of the London, Washington, and Pittsburgh G–20 Summits Prepared by Korea, Chair of the G–20* (July 20, 2010) (online at www.g20.org/Documents2010/07/July_2010_G20_Progress_Grid.pdf).

[272] International Monetary Fund, *Annual Report 2009* (2009) (online at www.imf.org/external/pubs/ft/ar/2009/eng/pdf/ar09_eng.pdf) (hereinafter "IMF Annual Report"); International Monetary Fund, *About the IMF: Overview* (online at www.imf.org/external/about/overview.htm) (accessed Aug. 10, 2010).

[273] *See id.* at 41–44.

[274] *See id.* at 42.

that collects, analyzes, and promulgates financial sector data on the G–20 economies.[275] In September 2009, the group issued a joint advisory report with the FSB explaining the role that financial information gaps played in the financial crisis, proposing best practices for data collection, identifying financial network connections across economies, and monitoring the susceptibility of domestic economies to shocks.[276] In October 2009, the FSB, IMF, and BIS issued a collaborative report offering guidelines and analytical frameworks for assessing the systematic importance of financial institutions, markets, and instruments across countries.[277] The IMF has also helped developing countries to manage their economies effectively by offering training and by designing macroeconomic, financial, and structural policies. Additionally, the IMF began increasing the amount of funds available for lending and made it easier for countries with good credit to access loans quickly in early 2009.[278] The eventual recipients of these loans, however, were developing countries with only a marginal impact on the international financial system.[279] By contrast, developed countries preferred to finance their capital injection and asset guarantee programs themselves rather than apply for IMF funds.

The Bank for International Settlements (BIS) is another international institution is working toward financial stability and reform.[280] The BIS's mission is to "serve central banks and financial authorities in their pursuit of monetary and financial stability, to foster international cooperation in those areas and to act as a bank for central banks."[281] The BIS houses the Basel Committee on Banking Supervision, which recommends financial reforms and issues macro-prudential guidelines and supervisory policies for central banks to mitigate systemic risk.[282] The G–20 has charged the Basel Committee with increasing transparency, strengthening capital requirements, and developing enhanced guidance to improve central banks' risk management practices.[283] All G–20 members

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[275] *Id.* at 12–13.

[276] *See* International Monetary Fund and Financial Stability Board, *The Financial Crisis and Information Gaps: Report to the G–20 Finance Ministers and Central Bank Governors* (Oct. 29, 2009) (online at www.financialstabilityboard.org/publications/r_091107e.pdf).

[277] *See* International Monetary Fund, Bank for International Settlements, and Financial Stability Board, *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations* (Oct. 2009) (online at www.bis.org/publ/othp07.pdf).

[278] IMF Annual Report, *supra* note 272, at 25. By contrast, at the very beginning of the crisis, the IMF had focused more on addressing food and fuel price shocks than on addressing failed financial institutions. *See id.* at 22–23.

[279] The biggest IMF emergency loans in 2009 were issued to Mexico, the Ukraine, and Hungary. IMF Annual Report, *supra* note 272, at 32.

[280] *See* Bank for International Settlements, *80th Annual Report,* at 1–5 (June 28, 2010) (online at www.bis.org/publ/arpdf/ar2010e.pdf?noframes=1).

[281] *See id.* at 107.

[282] *See id.* at 114–118.

[283] *See* G–20 London Summit Declaration, *supra* note 265, at 2. *See also* Group of Twenty, *Progress Report on the Immediate Actions of the Washington Action Plan,* at 2, 4–6 (Mar. 14, 2009) (online at www.g20.org/Documents/g20_washington_actionplan_progress_140309.pdf). Progressive adoption implies that implementation schedules may differ across and within countries. The United States, the European Union, Australia, and India have already implemented Basel II. *See* Office of the Comptroller of the Currency, *OCC Approves Basel II Capital Rule* (Nov. 1, 2007) (online at www.occ.gov/ftp/release/2007-123.htm); Official Journal of the European Union, *Directive 2006/49/EC of the European Parliament and of the Council on the Capital Adequacy of Investment Firms and Credit Institutions* (June 14, 2006) (online at eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_177/l_17720060630en02010255.pdf); Susan Bultitude, *Commercial and Regulatory Response to Current Financial System Turbulence: Regulatory Responses to Financial Market Turbulence,* at 3 (2008); Reserve Bank of India, *Monetary Policy Statement 2010–11,* at 25 (2010) (online at rbidocs.rbi.org.in/rdocs/notification/PDFs/MPSA200410.pdf).

have agreed to adopt and phase-in the Basel II capital framework, which was initially published in 2004, by the end of 2010.[284] Basel II measures and sets minimum standards for capital adequacy based on credit risk, operational risk, and market risk and aligns regulatory capital requirements closely with these underlying risks to help banks better identify and manage capital risks.[285] In June 2008, the Basel Committee issued *Principles for Sound Liquidity Risk Management and Supervision,* which emphasized that banks should have a "robust liquidity risk management framework" and sufficient loss-absorbing capital to withstand stress events, and detailed best practices for achieving these ends.[286]

In December 2009, the Basel Committee issued a reform proposal—commonly referred to as Basel III—that aims to strengthen global capital and liquidity regulations and to increase resiliency within the banking sector.[287] The proposal has been endorsed by the FSB and the G–20 leadership and contains five core reforms that would apply to all countries that adopt it: First, it raises the quality, consistency, and transparency of capital bases by imposing new, more rigorous Tier I capital requirements. For example, it requires common shares and retained earnings to be the "predominant" form of Tier I capital and limits the remainder to instruments that are subordinated with fully discretionary or non-cumulative dividends or coupons without a maturity date or an incentive to redeem. The plan also phases out hybrid capital instruments, which are now capped at 15 percent of Tier I capital. Second, the proposal strengthens the risk coverage of the capital framework by raising capital requirements for trading book and complex securitization exposures and resecuritization. It also incorporates a "stressed value-at-risk capital requirement" based on a 12-month period of "significant financial stress" and raises the standards of the supervisory review and disclosure processes. Third, it introduces a leverage ratio as a supplement to the Basel II risk-based framework to protect against excessive leverage in the banking system. Fourth, it contains requirements for a capital buffer that can be used during periods of stress. Finally, it employs a global "minimum liquidity standard" for international banks.[288]

4. The International Financial Landscape in the Aftermath of the Crisis

The aftermath of the most severe stages of the global financial crisis brought stark changes in management practices within banks, unprecedented government intervention within the financial sector, and modifications to the international financial system. The

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[284] *See* Group of Twenty Toronto Summit, *Declaration,* at 16 (June 26–27, 2010) (online at www.g20.org/Documents/g20_declaration_en.pdf).

[285] *See* Bank for International Settlements, Basel Committee on Banking Supervision, *International Convergence of Capital Measurement and Capital Standards: A Revised Framework,* at 6 (June 2006) (online at www.bis.org/publ/bcbs128.pdf).

[286] *See* Bank for International Settlements, Basel Committee on Banking Supervision, *Principles for Sound Liquidity Risk Management and Supervision* (Sept. 2008) (online at www.bis.org/publ/bcbs144.pdf). ("Liquidity is the ability of banks to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses.").

[287] *See* Bank for International Settlements, Basel Committee on Banking Supervision, *Consultative Document: Strengthening the Resilience of the Banking Sector,* at 2–3 (Dec. 2009) (online at www.bis.org/publ/bcbs164.pdf).

[288] *Id.* at 3.

dramatic crisis produced enormous financial losses whose impact was felt throughout the entire world.

The sheer amount of capital lost due to the crisis had the most pervasive effects in altering the international financial landscape. By the spring of 2009, the International Monetary Fund (IMF) was estimating that financial institutions worldwide would lose approximately $4 trillion on their loans and security holdings from 2007 to 2010.[289] Three of the five large, independent U.S. investment banks—Bear Stearns, Lehman Brothers, and Merrill Lynch—had either ceased to exist or were bought up by another bank. The two remaining independent U.S. investment banks, Goldman Sachs and Morgan Stanley, had converted to bank holding companies (BHCs), thereby gaining permanent access to the Federal Reserve discount window. In Europe, Iceland's three major banks, as well as ABN AMRO Bank N.V. (ABN AMRO) and Fortis in the Netherlands, Northern Rock in the United Kingdom, and the Anglo Irish Bank in Ireland had all been nationalized.

Perhaps the most striking feature of the financial landscape after the crisis was unprecedented government intervention. As a result of the losses they suffered, many banks needed to raise new equity from shareholders and/or their home-country governments.

Governments continue to fund a number of major financial institutions. While many of the large banks in the United States that were propped up by government intervention have succeeded in paying back a majority of their loans, banks like the Royal Bank of Scotland and Northern Rock continue to rely upon British government funding as a source of bank capital.[290]

As noted above,[291] disparities between the accounting standards of American and international banks were also highlighted in the wake of the crisis. In particular, fair value accounting rules remain a source of international regulatory friction.

Individual banks also altered their own management practices in the wake of the financial crisis. Prior to the crisis, very few large financial firms with international operations had risk management structures capable of assessing the large risks to which they were in fact exposed. An October 2009 report of the Financial Stability Board notes that firms have undertaken a number of changes in risk management practices in the aftermath of the crisis. Among the most significant are engaging board and senior management in risk management, increased use of and improvements to stress testing, and improving funding and liquidity risk management programs.[292]

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[289] IMF 2009 Global Financial Stability Report, *supra* note 108, at xv. A recent IMF Report puts this figure at $2.3 trillion. These figures ($4 trillion and $2.3 trillion) are global estimates of banks losses on all bank loans and bank securities for the period 2007–2010. *See* International Monetary Fund, *Global Financial Stability Report: Meeting New Challenges to Stability and Building a Safer System,* at 12 (Apr. 2010) (online at www.imf.org/external/pubs/ft/gfsr/2010/01/pdf/text.pdf).

[290] Other major international examples include ING in the Netherlands (recapitalized, asset guarantees); UBS AG, Switzerland (capital injections); and Anglo-Irish Bank, Republic of Ireland (nationalized). In the United States, the major example is Citigroup (recapitalized).

[291] *See* Section C.2.f, *supra.*

[292] Many banks kept a low advances to deposits ratio to significantly diminish risk and several, such as HSBC, which kept its ratio at around 100 percent. HSBC Holdings, *Annual Report and Accounts 2009,* at 246 (Mar. 1, 2010) (online at www.hsbc.com/1/PA_1_1_S5/content/assets/investor_relations/hsbc2009ara0.pdf).

5. Winding Down Rescue Efforts

Buoyed by a rising market and a dramatic turnaround in the fortunes of global banks beginning in 2009, several significant rescue efforts extended by foreign governmental agencies were curtailed or wound down altogether.

Between September 2009 and January 2010, numerous banks in G–7 countries rallied to extricate themselves from various government support programs. In early November 2009 Lloyds Banking Group completed its exit from the United Kingdom's Asset Protection Scheme (APS) and paid a £2.5 billion ($4.1 billion) fee that helped recoup the taxpayers' investments.[293] Formed in February 2009, the APS insured banks against the risk of losses stemming from backlogs of shaky assets, such as corporate and leveraged loans, commercial property loans and structured credit assets.[294] Royal Bank of Scotland, which positioned assets originally valued at £325 billion ($471 billion) with APS under an agreement that its liability was reduced to £19.5 billion ($28.2 billion) of potential losses, is still covered by the plan.[295] RBS reportedly agreed to fees that amount to £6.5 billion ($9.4 billion), or 2 percent of the assets covered by the plan, and issued non-voting B shares to HM Treasury to cover the costs.

In the fall of 2009, France's Société Générale and BNP Paribas both completed separate capital raises to repay government assistance and strengthen their capital positions.[296]

Earlier this year, a number of bank support schemes in healthier economies were shuttered. On March 31, Australia ended a program that backstopped lenders and warned banks against using the situation as an excuse to increase interest rates above national levels. A separate guarantee for depositors with up to $1 million AUD ($920,000) per account will be held in place for at least one more year. Australian regulators said the program enabled banks to raise more than $32 billion AUD ($29 billion) from international credit markets since its inception. Participating banks paid more than $1 billion AUD ($920 million) for the service.

Bank guarantee programs in the United States, Canada, France and South Korea had shut down by late 2009, and other programs in the United Kingdom, Sweden, Germany, Spain, Ireland and Denmark were slated to close this year after numerous extensions. In addition, the European Commission approved an extension of guarantee schemes for banks in Ireland, Spain, and Denmark and a liquidity scheme in Hungary until December 31, 2010.[297]

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[293] HM Treasury Notice—Lloyds Banking Group and Royal Bank of Scotland, *supra* note 220.

[294] HM Treasury Statement on the Asset Protection Scheme, *supra* note 219.

[295] HM Treasury, *Statement on the Government's Asset Protection Scheme,* at 3 (Feb. 26, 2009) (online at webarchive.nationalarchives.gov.uk/20100407010852/www.hm-treasury.gov.uk/d/press_18_09.pdf).

[296] On October 6, 2009, Société Générale announced a €4.8 billion ($7 billion) rights offer slated to reimburse the government for €3.4 billion ($5 billion), which was apportioned in equal measures of subordinated debt and preferred shares. The cost of that government support was expected to reach €185 million ($270 million). Nearly two weeks earlier, BNP Paribas announced a plan to raise €4.3 billion ($6.3 billion) through its own rights offer. The deal was intended to help BNP repay the French government for €5.1 billion ($7.5 billion) plus €226 million ($330.6 million) in interest. Both BNP and Société Générale agreed to increase household loan volumes over the coming year by 3 percent.

[297] Europa, *State Aid: EU Authorises Extension of Bank Support Scheme in Ireland, Spain, Denmark and Hungary* (June 29, 2010) (online at europa.eu/rapid/pressReleasesAction.do?reference=IP/10/854&type=HTML).

As some banking systems regain strength and regulators wind down emergency assistance programs, governments are shifting their focus to preventive measures. The recently enacted Wall Street Reform and Consumer Protection Act of 2010 appears likely to result in tougher banking regulations in the United States. Some advocates of the United States' taking a leadership role have pushed for a stronger version of a provision in the Dodd-Frank Wall Street Reform and Consumer Protection Act that sets limited conditions on the content of Tier 1 capital at large banks[298] and stated officials at the Basel Committee on Banking Supervision had failed the international community. These ideas were expressed by Senator Ted Kaufman (D–DE), who called Basel I and II "colossal failures" and criticized the direction of Basel III on the Senate floor. As an alternative to relying on an international rules committee, Senator Kaufman specifically pressed for legislation that provided strict guidelines to define Tier 1 capital.[299] Despite this criticism, the new law mainly calls for tougher capital requirements and leaves the final details open to interpretation by regulators and industry experts. Future regulations in the United States will also depend on the final form of the Basel III accords, which will establish international capital and leverage standards for banks. Months before President Obama signed the financial reform bill into law, Comptroller of the Currency John C. Dugan took the opposite side of Senator Kaufman's argument and urged Congress to collaborate on capital standards with the international community.[300] Even though the Dodd-Frank bill was signed by President Obama there are still questions about whether regulators will use powers granted by the law to take a lead role on banking standards or adopt a wait-and-see approach concerning the talks in Switzerland.

D. International Impact of Rescue Funds

The interconnectedness of the financial system, the increasing fluidity of borders with respect to financial transactions and the flow of capital,[301] and several decisions concerning the allocation of TARP funds mean that U.S. rescue programs likely had international ramifications and also that international rescue programs likely assisted U.S. institutions. As discussed in more detail below, however, the flow of funds from the United States is likely to have exceeded the flow of funds into it (both in absolute and relative terms).

Despite the methodological challenges that make it difficult to pinpoint the precise movement of funds,[302] it is very likely that a meaningful portion of TARP funds had an international impact, as

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[298] Dodd-Frank Wall Street Reform and Consumer Protection Act, *supra* note 162, at § 171.

[299] Office of Senator Ted Kaufman, *Banking Conference Should Agree to Strong Financial Reforms to Bolster International Bank Capital Standards* (June 17, 2010) (online at www.kaufman.senate.gov/press/press_releases/release/?id=C328F9F2-7628-43FC-BD70-D06BA22C89D6).

[300] John C. Dugan, comptroller of the currency, Remarks before the Institute of International Bankers (Mar. 1, 2010) (online at www.occ.gov/ftp/release/2010-26a.pdf).

[301] For further discussion concerning globalization and cross-border integration within financial institutions, *see* Section B, *supra*.

[302] The Panel emphasized this point in its December oversight report. December Oversight Report, *supra* note 39, at 111 ("[I]t is difficult to establish, in many cases, whether any TARP funds ended up outside the United States.").

demonstrated in more detail below. There may have been both positive and negative consequences of this cross-border flow of funds. EESA requires the Secretary to take steps to maximize taxpayer return,[303] and an investor is likely to benefit from a company's ability to pursue the best possible business opportunities. In some cases, permitting a company to bolster international sales through international investments may generate revenues that allow it to repay the taxpayer in full within a reasonable period of time. General Motors Company (General Motors), for example, has invested in its China operations and has seen sales there increase dramatically.[304] Limiting General Motors' ability to take advantage of its opportunities in Asia might have weakened the taxpayer's investment in the company.

Enabling the cross-border flow of funds may also benefit companies over the long term. If the government had permitted AIG to compensate domestic counterparties in return for the termination of certain credit default swap contracts but had required the company to abrogate similar contracts with foreign counterparties, AIG's ability to conduct international transactions in the future would have been compromised. The U.S. government might have been in an awkward negotiating position vis-à-vis foreign governments if TARP recipients had been required to abrogate foreign contracts while simultaneously honoring domestic contracts.

On the other hand, there may be several drawbacks to using domestic rescue funds to finance foreign operations. It may encourage free riders, as foreign governments that expect their counterparts to initiate large rescue operations may be less likely to take action themselves. If the costs of financial rescue efforts are realized by home countries but benefits are distributed among foreign economies, countries may engage in a "race to inaction."

The cross-border flow of rescue funds may also encourage regulatory arbitrage. Companies may be incentivized to locate their headquarters in countries that are likely to initiate prompt, extensive rescue efforts in the event of a crisis, while shifting their operations—and potentially the most risky operations—to countries with less stringent regulation. Such offshore movements could reduce the capacity of U.S. regulators to monitor the institution and could negatively affect the U.S. labor market, which might result in U.S. taxpayers realizing a reduced percentage of the economic benefits of the institution's operations while bearing a substantial portion of the costs of a rescue.

Ultimately, basic governance principles may be disrupted when the government of one country asks its citizens to subsidize the

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[303] 12 U.S.C. § 5201(2)(C). *See also* 12 U.S.C. § 5233(b)(1)(A)(iv) (requiring the Congressional Oversight Panel to submit "regular reports" on the "effectiveness of the program from the standpoint of minimizing long-term costs to the taxpayers and maximizing the benefits for taxpayers.").

[304] General Motors' sales in China in the first half of 2010 outpaced sales for the same period in 2009 by 48.5 percent. General Motors Corp., *GM Sets New June, First Half Sales Records in China* (July 2, 2010) (online at media.gm.com/content/media/cn/en/news/news_detail.brand_gm.html/content/Pages/news/cn/en/2010/June/0702) (hereinafter "GM Sets New June, First Half Sales Records in China"). According to Stephen J. Girsky, the vice chairman for corporate strategy and business development, "China's a big piece of the value of the company, and since we pull cash out of China, it helps fund investments in other parts of the company as well." David Barboza and Nick Bunkley, *G.M., Eclipsed at Home, Soars to Top in China,* New York Times (July 21, 2010) (online at www.nytimes.com/2010/07/22/business/global/22auto.html?hp=&pagewanted=all).

economy of another country. The authority of a government to tax its citizens derives in part from the assumption that money taken from individual citizens will be used for the collective good of that nation's citizenry.[305] To tax one nation's citizens to benefit those of another may be contrary to that fundamental principle. Regarding the TARP, it is conceivable that in some cases TARP funds could be used for purposes that are contrary to the interests of U.S. citizens if, for example, the outsourcing of U.S. economic activities facilitated domestic job losses.

Regardless of the policy merits of permitting the cross-border flow of U.S. rescue funds or allowing more rescue funds to flow out of the United States than back into it—and the Panel takes no position on that issue—it is not easy to disentangle the cross-border flow of TARP funds. The difficulty of assessing the size and scope of the cross-border movement of rescue money makes it challenging to evaluate the impact of those movements on both U.S. and foreign economies.

As the Panel has described in several prior reports, two factors make it difficult to track the flow of TARP funds. First, the TARP did not require recipient institutions to use the funds for specific purposes or to submit reports on their use of the funds, a problem that was due in part to the terms and structure of the Securities Purchase Agreements (SPAs) signed by TARP recipients. Although the SPAs included a list of the goals of the TARP, they did not specify how these goals would be met, measured, or reported. They also included the goals as part of the precatory opening clauses of the agreement, as opposed to situating them in the binding language that followed. As a result, the SPAs did not impose specific obligations on TARP recipients to track the funds they received.[306] The absence of these data impedes the process of following the money. Despite the Special Inspector General for TARP's (SIGTARP) assessment that financial institutions may in fact be capable of providing "meaningful information" on their use of TARP funds, few institutions have done so.[307]

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[305] *See, e.g., Federalist No. 30* (online at www2.hn.psu.edu/faculty/jmanis/poldocs/fedpapers.pdf) ("[T]wo considerations will serve to quiet all apprehension on this head: one is, that we are sure the resources of the community, in their full extent, will be brought into activity for the benefit of the Union.").

[306] *See* U.S. Department of the Treasury, *Securities Purchase Agreement for Public Institutions* (online at www.financialstability.gov/docs/CPP/spa.pdf) (hereinafter "Securities Purchase Agreement for Public Institutions") (accessed Aug. 10, 2010). December Oversight Report, *supra* note 39, at 108–09 & n.435 ("Added to the fact that there are no specific restrictions on use of funds or requirements with respect to the reporting of such use, the SPAs seem to be a missed opportunity for monitoring the use of taxpayers' funds."). Several other Panel reports discuss the absence of use of funds reports. *See, e.g.,* Congressional Oversight Panel, *May Oversight Report: The Small Business Credit Crunch and the Impact of the TARP,* at 26 n.65 (May 13, 2010) (online at cop.senate.gov/documents/cop-051310-report.pdf); Congressional Oversight Panel, *Questions About the $700 Billion Emergency Economic Stabilization Funds,* at 4–5 (Dec. 10, 2008) (online at frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_senate_committee_prints&docid=f:45840.pdf) (noting the need for the companies that received TARP funds to explain how they were using those funds).

[307] Office of the Special Inspector General for the Troubled Asset Relief Program, *SIGTARP Survey Demonstrates that Banks Can Provide Meaningful Information on Their Use of TARP Funds,* at 5–13 (July 20, 2009) (online at www.sigtarp.gov/reports/audit/2009/SIGTARP_Survey_Demonstrates_That_Banks_Can_Provide_Meaningful_Information_On_Their_Use_Of_TARP_Funds.pdf). Citigroup presents a notable exception. Citigroup established a Special TARP Committee, which set up guidelines consistent with the objectives and spirit of the program, and internal controls to ensure that TARP funds would only be used for lending and mortgage activities. It also separately publishes regular reports summarizing its

Continued

Second, because money is fungible, it is not possible to isolate a dollar of government spending on a rescue program and connect it to a dollar of spending by a financial institution.[308] Without careful safeguards, there is no guarantee that money allocated for one purpose is not used for another.

In addition, as mentioned above, regulatory barriers and tax implications may impede the movement of money across borders.[309] This creates complications for following the money because it means that money does not necessarily move in direct proportion to the size of an institution's overseas business operations. For instance, if Bank X received $100 million from the TARP and conducts 10 percent of its operations in Brazil, there is no certainty that $10 million of the government's investment would be employed for its Brazilian operations.

One interesting distinction between U.S. and non-U.S. rescue efforts may be noted, however. The CPP, the primary tool used in the TARP rescue of the U.S. banking system, was a systemic program: it focused on the banking industry as a whole. In doing so, it injected $163.5 billion into the 17 of the 19 largest U.S. banks.[310] Those largest banks are, as discussed in more detail below, the banks with the largest international operations.[311] In contrast, European rescue programs tended in the main to focus more on specific troubled institutions; even the U.K. capital injection program was only taken up by two institutions. The operations of many of the largest non-U.S. recipients of rescue funds were, as seen below, either concentrated on their home markets, such as Hypo Real Estate in Germany, or extended over only one national border (as seen with the Irish and Icelandic banks operating in the United Kingdom).[312] The logical inference is that the U.S. banking rescue may well have had significantly more international impact than non-U.S. rescue efforts had on the United States.

1. U.S. Rescue Funds that May Have Benefited Foreign Economies

Figure 15 details the potential international dimension of U.S. rescue programs. The figure shows the funds that U.S.-based institutions received from the U.S. government and the revenue those institutions derived from their operations outside of the United States. Although the size of an institution's international operations cannot serve as a perfect proxy for the percentage of rescue funds that it used internationally, it may provide a rough guide. Companies with more sizeable international operations are likely to allocate a greater percentage of rescue funds to international purposes.

TARP spending initiatives. *See generally* Citigroup, *TARP Progress and Updates* (online at www.citigroup.com/ citi/corporategovernance/tarp.htm) (accessed Aug. 10, 2010).

[308] December Oversight Report, *supra* note 39, at 109.

[309] For further discussion concerning globalization and cross-border integration within financial institutions, *see* Section B.3, *supra*.

[310] Treasury Transactions Report, *supra* note 64.

[311] Additionally, where the U.S. rescue addressed the needs of individual institutions in supplemental TARP programs such as the TIP and the SSFI, the recipients were institutions with extensive international operations such as AIG, Bank of America, and Citigroup. *See* January Oversight Report, *supra* note 226, at 27–28.

[312] However, as discussed in Section B.2 above, it merits mention that many European banks made substantial investments in U.S.-based assets with significant exposure to the U.S. housing market.

FIGURE 15: U.S. RESCUE PROGRAMS WITH INTERNATIONAL DIMENSIONS

U.S. Firms	Federal Funds Received ($millions)[313]	Non-U.S. Revenue ($millions)		Non-U.S. Revenue (% Total)
		2005	2006	2005–2006
American Express[314]	3,389	8,180	8,760	33
AIG[315]	69,835	49,685	55,899	48
Bank of America[316]	35,000	5,178	10,699	12
Bank of New York-Mellon[317]	3,000	1,810	2,063	30
Capital One[318]	3,555	1,088	997	8
Chrysler[319]	14,310	NA	NA	NA
Citigroup[320]	50,000	33,414	38,211	41
General Motors[321]	50,745	54,557	63,310	35
GMAC[322]	16,290	2,170	2,091	11
Goldman Sachs[323]	10,000	10,599	17,304	44
JPMorgan Chase[324]	25,000	11,480	16,091	24
Merrill Lynch[325]	10,000	8,518	12,056	34
Morgan Stanley[326]	10,000	9,540	13,511	38
State Street[327]	2,000	2,130	2,741	41

[313] Unless otherwise noted, Federal Funds Received are calculated using TARP transactions report. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as% 20of%207-30-10.pdf) (hereinafter ''Treasury Transactions Report'').

[314] U.S. net revenue. American Express, *Annual Report 2006* (Mar. 8, 2007) (online at library.corporate-ir.net/library/64/644/64467/items/235025/Amex_06AR_03_8_07.pdf).

[315] U.S. total revenue. U.S. revenues calculated by subtracting Canadian revenues from domestic. American International Group, Inc., *Form 10–K for the Fiscal Year Ended December 31, 2006* (Mar. 1, 2007), at 24, 124 (online at www.sec.gov/Archives/edgar/data/5272/000095012307003026/y27490e10vk.htm).

[316] TARP funds received by institution through the Capital Purchase Program (CPP) and through the Targeted Investment Program (TIP). Does not include the $10 billion acquired with the acquisition of Merrill Lynch in January 2009. U.S. revenue. U.S. revenues calculated by subtracting Canadian revenues from North American revenues. Bank of America, *Annual Report 2006,* at 150 (Mar. 1, 2007) (online at media.corporate-ir.net/media_files/irol/71/71595/reports/2006_AR.pdf).

[317] Domestic revenue. Bank of New York-Mellon, *Form 10–K for the Fiscal Year Ended December 31, 2006,* at 31 (Mar. 2007) (online at www.bnymellon.com/investorrelations/financialreports/archive/bankofnewyork/10K2006.pdf).

[318] Domestic total revenue. Capital One, *Annual Report 2006,* at 54, 130 (Mar. 2007) (online at media.corporate-ir.net/media_files/irol/70/70667/AR2006.pdf).

[319] While Chrysler Group LLC (Chrysler) was a non-public subsidiary of DaimlerChrysler in 2005–2006, an average of 23 percent of Chrysler's revenue from 1995–1996 was foreign. Chrysler Corp., *Form 10–K for the Fiscal Year Ended December 31, 1996* (Jan. 21, 1997) (online at www.sec.gov/Archives/edgar/data/791269/0000950124-97-000176.txt).

[320] Treasury made three separate investments in Citigroup Inc. (Citigroup) under the CPP, Targeted Investment Program (TIP), and Asset Guarantee Program (AGP) for a total of $50 billion. On 6/9/2009, Treasury entered into an agreement with Citigroup to exchange up to $25 billion of Treasury's investment in Fixed Rate Cumulative Perpetual Preferred Stock, Series H (CPP Shares) ''dollar for dollar'' in Citigroup's Private and Public Exchange Offerings. On 7/23/2009 and 7/30/2009, Treasury exchanged a total of $25 billion of the CPP shares for Series M Common Stock Equivalent (''Series M'') and a warrant to purchase shares of Series M. On 9/11/2009, Series M automatically converted to 7,692,307,692 shares of common stock and the associated warrant terminated on receipt of certain shareholder approvals. North America total revenues, net of interest expense. Citigroup, Inc., *Form 10–K for the Fiscal Year Ended December 31, 2006,* at 104 (Feb. 23, 2007) (online at www.sec.gov/Archives/edgar/data/ 831001/000119312507038505/d10k.htm). Regional revenue numbers from Bloomberg (accessed August 5, 2010).

[321] General Motors Corp., *Form 10–K for the Fiscal Year Ended December 31,* 2006, at 61–65 (Mar. 15, 2007) (online at www.sec.gov/Archives/edgar/data/40730/000095012407001502/k11916e10vk.htm).

[322] Total net financing revenue and other income. GMAC LLC, *Form 10–K for the Fiscal Year Ended December 31, 2006* (Mar. 13, 2007) (online at www.sec.gov/Archives/edgar/data/40729/000095012407001471/k12221e10vk.htm).

[323] Total net revenues, listed for ''Americas'' although footnote states that ''substantially all relates to the United States.'' Goldman Sachs, *2006 Annual Report,* at 118 (Mar. 2007) (online at www2.goldmansachs.com/our-firm/investors/financials/archived/annual-reports/attachments/2006-gs-annual-report.pdf).

[324] JPMorgan Chase, *2006 Consolidated Financial Statements* (Feb. 21, 2007) (online at files.shareholder.com/downloads/ONE/986211036x0x86653/f71d68a8-37bb-4c6a-80dc-e733557ff685/Consolidated_financial_statements_and_Notes.pdf).

[325] Net Revenue, United States. Originally $10 billion was set aside for Merrill Lynch under the CPP. However, settlement was deferred pending merger. The purchase of Merrill Lynch by Bank of America was completed on 1/1/2009, and this transaction under the CPP was funded on 1/9/2009. Merrill Lynch, *Complete Financials 2006,* at 93 (online at www.ml.com/annualmeetingmaterials/2006/ar/pdfs/annual_report_2006_financials.pdf) (accessed Aug. 11, 2010).

[326] Net Revenue, United States. Morgan Stanley, *Form 10–K for the Fiscal Year Ended December 31, 2006,* at 32, 157 (Feb. 13, 2007) (online at www.sec.gov/Archives/edgar/data/895421/000119312507027693/d10k.htm).

[327] Total revenue. State Street, *Annual Report 2007,* at 24, 124 (online at library.corporate-ir.net/library/78/782/78261/items/284296/STT_AR.pdf) (accessed Aug. 11, 2010).

As shown in the figure above, several institutions that received U.S. rescue funds had substantial international operations. The amount of funding—as well as the terms—varied from institution to institution. In addition, because the TARP imposed few restrictions on the use of the funds,[328] each institution used the funds for different purposes. Many of these large institutions had extensive non-U.S. operations. As discussed above, the percentage of an institution's revenue derived from foreign operations may serve as a

[328] *See* note 306, *supra.*

rough—but imperfect—approximation of the cross-border flow of rescue funds, or at least the potential overseas benefit that such funds might have provided. The examples below provide some additional context on the ways in which institutions have employed government assistance for cross-border purposes.

• AIG. As discussed in more detail in the Panel's June 2010 report, due to the international nature of AIG's business,[329] approximately $61.6 billion of TARP and other government funds received by the company went to foreign institutions and governments.[330] More than half of the money AIG paid to credit default swap (CDS) counterparties on multi-sector collateralized debt obligations (CDOs) went to foreign institutions ($40.2 billion of the $62.2 billion in notional value).[331]

—AIG's foreign subsidiaries received some funds through capital contributions. Life insurance subsidiary Nan Shan as well as others in Taiwan, Japan, and Hong Kong received $4.4 billion.

—Foreign counterparties of AIG received government funds from AIG's payments through its securities lending program. AIG's foreign-based securities lending counterparties received $28.7 billion.[332]

—TARP and government funds also benefited foreign banks through AIG's regulatory capital swaps.[333] Although the full list of these counterparties is unknown, the top seven counterparties to these swaps held a combined $210.9 billion in notional exposure.[334]

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[329] As noted in the Panel's June 2010 report, one-third of AIG's revenues are derived from East Asia. *See* June Oversight Report, *supra* note 10, at 104.

[330] Of the 61.6 billion that went to foreign institutions and governments, $4.4 billion went to foreign life insurance subsidiaries, $28.7 billion to securities lending counterparties, $17.2 billion to Maiden Lane III counterparties, and $11.3 billion to CDS counterparties for additional collateral postings.

[331] It is important to note, also, that some of these foreign-based institutions have subsidiaries in the United States, so the potential existed for funds to flow through to them.

[332] The following foreign-based securities lending counterparties received U.S. rescue funds: Barclays ($7.0 billion), Deutsche Bank ($6.4 billion), BNP Paribas ($4.9 billion), HSBC ($3.3 billion), Dresdner Kleinwort ($2.2 billion), UBS ($1.7 billion), ING ($1.5 billion), Société Générale ($0.9 billion), Credit Suisse ($0.4 billion), Paloma Securities ($0.2 billion), and Citadel Securities ($0.2 billion). The following foreign-based AIGFP CDS counterparties received government funds through either additional collateral postings or Maiden Lane III: Deutsche Bank ($5.4 billion), Landesbank Baden-Wuerttemberg ($0.1 billion), Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A. (Rabobank) ($0.8 billion), Société Générale ($11.0 billion), The Royal Bank of Scotland ($0.7 billion), Deutsche Zentral-Genossenschaftsbank ($1.0 billion), Dresdner Bank AG ($0.4 billion), UBS ($3.3 billion), Barclays ($1.5 billion), Bank of Montreal Financial Group (Bank of Montreal) ($1.1 billion), Calyon ($2.3 billion), Deutsche Zentralgenossenschaftbank AG (DZ Bank) ($0.7 billion), KFW ($0.5 billion), Banco Santander ($0.3 billion), Danske ($0.2 billion), and HSBC Bank ($0.2 billion). *See* American International Group, Inc., *AIG Discloses Counterparties to CDS, GIA, and Securities Lending Transactions* (Mar. 15, 2009) (online at media.corporate-ir.net/media_files/irol/76/76115/ releases/031509.pdf).

[333] Many European banks entered into CDSs with a France-based subsidiary of AIGFP in order to decrease the amount of regulatory capital they were required to hold. As these swaps were not terminated as part of the government rescue, the benefits that the counterparties received came not in the form of cash but rather in the continuation of contracts that led to more favorable regulatory treatment in the counterparties' home countries. *See* June Oversight Report, *supra* note 10, at 111–114.

[334] The counterparties to AIG's regulatory capital swaps included the following top seven swap-holders: Dutch bank ABN AMRO ($56.2 billion notional exposure), Danish bank Danske ($32.2 billion notional exposure), German bank KFW ($30 billion notional exposure), and French banks Credit Logement ($29.3 notional exposure), Calyon ($24.3 billion notional exposure), BNP Paribas ($23.3 billion notional exposure) and Société Générale ($15.6 billion notional exposure). *See Reg Capital Arb,* E-mail from Paul Whynott, Federal Reserve Bank of New York, to Alejandro LaTorre, vice president, Federal Reserve Bank of New York (Nov. 4, 2008) (FRBNY–TOWNS–R1–188408). For further data on the impact an AIG bankruptcy would have had on these counterparties, *see* June Oversight Report, *supra* note 10, at 112–114.

—AIGFP's foreign CDS counterparties received $17.2 billion through Maiden Lane III payments and $11.3 billion from additional collateral postings. Further foreign counterparties benefited from the creation of the Maiden Lane III facility.[335]

In addition to direct payments to foreign counterparties, some of a domestic counterparty's own counterparties may be located overseas, which may result in further cross-border payments. Conversely, money paid to a foreign counterparty may return to the United States via its own counterparty relationships with U.S. institutions. The dealings of Goldman Sachs with respect to the CDSs on CDOs that were eventually acquired by Maiden Lane III provide a compelling example of the effect of counterparty relationships on the flow of funds across borders, as 96.9 percent of the cash received by Goldman effectively flowed to non-U.S. institutions.[336] (These institutions, as well as other indirect foreign beneficiaries of the AIG rescue—entities that sold hedges on AIG to Goldman and benefited from not having to make good on that protection—are listed in Annex II.)

- **General Motors.** GM, which received a total of $50.7 billion from Treasury amid challenges in the domestic market, increased sales in China by 48.5 percent, and sold more vehicles in China than it did in the United States in the past year.[337] While GM has stated that no taxpayer money has been used to further operations in China, the Chinese government stimulus package strengthened demand amongst Chinese citizens by encouraging sales of fuel-efficient vehicles and assisting farmers with purchases of cars.[338] It can be inferred that assets held as a result of capital injection programs by the U.S. government strengthened GM's capabilities abroad. As shown in Figure 16 below, while capital injections helped subsidize GM's losses in North America and Europe, GM generated posi-

[335] *See* June Oversight Report, *supra* note 10, at 93.

[336] According to recently released documents, there were 32 Goldman CDS counterparties that benefited directly from government assistance provided through the Maiden Lane III facility, and 31 of these entities are foreign. Each of the foreign entities listed below held a CDO for which Goldman had written CDS protection and entered into contracts with AIG laying off that risk. While Goldman was required to perform under its contracts whether or not AIG performed, when the government made the decision to pay AIG's counterparties at par—including Goldman—the following foreign entities were direct beneficiaries: DZ Bank, Banco Santander Central Hispano SA, Rabobank Nederland-London Branch, Zurcher Kantonalbank, Dexia Bank S.A., BGI INV FDS GSI AG, Calyon-Cedex Branch, The Hongkong & Shanghai Banking Corp., Depfa Bank Plc, Skandinaviska Enskilda Bankensweden, Sierra Finance plc (Sierra Finance), PGGM Pensioenfonds (PGGM), Natixis, Zulma Finance Plc (Zulma Finance), Stoneheath Re CRDV G (Stoneheath), Hospitals of Ontario Pension Plan, Venice Finance plc (Venice Finance), KBC Asset Management, NVD Star Finance, MNGD Pension Funds LTD, Shackleton Re Limited (Shackleton), Infiniti Finance plc, Legal & General Assurance, Barclays, Signum Platinum, Lion Capital Global Credit I LTD, Kommunalkredit Int Bank, Credit Linked Notes LTD, Ocelot CDO I PLC, Hoogovens PSF ST, Hypo Public Finance Bank, and The Royal Bank of Scotland. It merits mention that it is not possible to develop a perfect correlation between funds provided to Goldman and funds that went to foreign entities. Since Goldman was making payments to its counterparties on the CDS contracts even before the government created the Maiden Lane III facility, it is difficult to track the precise flow of government funds that were provided as part of the AIG rescue. *See* Senate Committee on Finance, *Grassley Submits Questions for Committee Record About Taxpayer Dollars for AIG, Goldman Sachs Counterparties* (July 23, 2010) (online at finance.senate.gov/newsroom/ ranking/release/?id=cb2c54ae-fb8b-43e0-abeb-9d12a422810c) (see "Attachment 2"). Please see Annex II, *infra,* for a discussion of the indirect beneficiaries of the government's assistance to AIG.

[337] Treasury Transactions Report, *supra* note 64, at 18; GM Sets New June, First Half Sales Records in China, *supra* note 304.

[338] Nick Bunkley, *G.M., Eclipsed at Home, Soars to Top in China,* New York Times (July 21, 2010) (online at www.nytimes.com/2010/07/22/business/ global/22auto.html?pagewanted=all) (Phone interview between Nick Bunkley and Steve Girsky, VP of Corporate Strategy and Business Development at GM).

tive earnings in both Latin America and the Asia Pacific region leading up to its financial rescue by the U.S. government.

FIGURE 16: GENERAL MOTORS INCOME (LOSS) FROM CONTINUING OPERATIONS, PRE-TAX (NINE MONTHS ENDED SEPTEMBER 30) [339]

[Dollars in millions]

	2007	2008
GM North America	$(2,062)	$(10,553)
GM Latin America	924	1,476
GM Europe	(79)	(908)
GM Asia Pacific	609	117

[339] General Motors Corp., *Form 10–Q for the Quarterly Period Ended September 30, 2008,* at 54 (Nov. 10, 2008) (online at www.sec.gov/Archives/ edgar/data/40730/000095015208009040/k46806e10vq.htm).

- **Chrysler.** Chrysler last reported earnings in the fall of 2007 prior to being taken private by Cerberus Capital Management. Representatives from the company did communicate that Chrysler lost $431 million in the first quarter of 2008.[340] Chrysler, which has received upwards of $14.3 billion from Treasury, has seen its operations expand in select international markets but falter in the aggregate.[341] The Italian automaker Fiat benefited from U.S. government rescue efforts, as Fiat assumed a 35 percent stake in Chrysler without committing to make future cash injections into the company. More recently, Chrysler has announced that its sales increased by 92 percent in the United Kingdom, and by 75 percent in China in December 2009. Nevertheless, international sales fell by 34 percent for all of 2009.[342]
- **GMAC/Ally Financial.** GMAC, which recently renamed itself Ally Financial, received $16.3 billion from Treasury.[343] Its net revenue expanded from 2006 to 2007, but the company experienced no significant changes in terms of geographic sources of that revenue. In 2006, GMAC's international net revenue hovered around 22 percent of its total net revenue.[344] This is similar to 2007, when 24 percent of its net revenue was foreign, and the company seemed to be expanding throughout Latin America and Canada.[345] The majority of the company's 2007 foreign net revenue was attributed to Europe and Latin America. Undoubtedly, the rescue of GMAC enabled the company to continue operating its profitable international and insurance operations, whereas its domestic auto finance operations and Residential Capital LLC (ResCap), whose mortgage assets are both foreign and domestic, continued to generate losses for GMAC leading up to the fall of 2008. In fact, in the first nine months of 2008, GMAC's North American operations lost $950

[340] Daimler AG, *Annual Report 2008,* at 53 (Feb. 17, 2009) (online www.daimler.com/Projects/ c2c/channel/documents/1677323_DAI_2008_Annual_Report.pdf) (hereinafter "Daimler Annual Report").

[341] U.S. Department of the Treasury, *Troubled Asset Relief Program Report to Congress for the Period January 1, 2009 to January 31, 2009* (Feb. 3, 2009) (online at www.financialstability.gov/docs/105CongressionalReports/ 105aReport_02032009.pdf).

[342] Chrysler Group, *Chrysler Group LLC Reports December 2009 Sales Outside North America* (Jan. 6, 2010) (online at www.media.chrysler.com/ newsrelease.do;jsessionid=5191A83AE4AF64CD206BD16D25AD3636?&id=8815).

[343] Treasury Transactions Report, *supra* note 64, at 18.

[344] Data accessed through Bloomberg data service on July 22, 2010.

[345] Data accessed through Bloomberg data service on July 22, 2010.

million, and ResCap lost $4.6 billion. In April 2010, ResCap announced that it had agreed to sell the majority of its European mortgage assets to funds affiliated with the Fortress Group.

- **Citigroup.** Citigroup received $50 billion in TARP funds through three investments by Treasury.[346] Citigroup has published quarterly reports specifying the uses to which it has put its TARP funds.[347] These reports detail an entirely domestic use of capital, making funds available to U.S. consumers and commercial borrowers. Additionally, Citigroup used funds to help mortgage holders avoid foreclosure and to help credit card holders manage their card debt.[348] While approximately 45 percent of Citigroup's income in 2005 and 2006 came from non-U.S. sources, the company's losses were predominately from domestic businesses. Of the $32.1 billion in losses Citigroup suffered in 2008, $2.1 billion, or nearly 8 percent, of the losses stemmed from the company's overseas operations.[349] Citigroup posted $1.7 billion in losses in Europe, the Middle East, and Africa as well as $2 billion in losses from its Latin American businesses. These losses were countered by $1.6 billion in profits from the company's operations in Asia. The assistance provided by the American taxpayer through the TARP was used for a number of purposes, including increasing liquidity and bolstering the company's balance sheet against mounting losses both domestically and abroad.

U.S. rescue efforts impacted foreign institutions in several other ways. For instance, foreign institutions benefited from the Federal Reserve's liquidity facilities, such as the currency swaps it negotiated with foreign central banks that allowed them to provide U.S. dollar funding to foreign institutions.[350] In addition, some foreign institutions were able to take advantage of the FDIC's Temporary Liquidity Guarantee Program (TLGP), so long as they owned commercial banks in the United States: HSBC, BNP Paribas, Banco Santander, and Mitsubishi Tokyo Financial Group all issued debt

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[346] December Oversight Report, *supra* note 39, at 20. This figure ($50 billion) includes $45 billion in capital injections and the TARP's $5 billion exposure to losses under the Asset Guarantee Program.

[347] *See, e.g.,* Citigroup, *TARP Progress Report Fourth Quarter 2009* (Mar. 2, 2010) (online at www.citibank.com/citi/corporategovernance/data/tarp/tarp_ pr_4q09.pdf?ieNocache=929).

[348] *See id.*

[349] Citigroup, Inc., *Form 10–K for the Fiscal Year Ended December 31, 2008,* at 26 (Feb. 27, 2009) (online at www.sec.gov/Archives/edgar/data/ 831001/000119312509041237/ d10k.htm#fin30906_13).

[350] *See* Section E.2, *infra.*

of $1 billion or more through the TLGP's Debt Guarantee Program.[351] One key effect of U.S. rescue programs was the competitive advantages they may have provided to U.S. financial institutions. Signaling the government's implicit guarantee of institutions it deemed to be "too big to fail" may have given U.S. institutions funding advantages over their foreign counterparts.[352] Additionally, when the U.S. government provided support to U.S. firms that might have failed otherwise, foreign firms lost the opportunity to expand their market share.

2. International Rescue Funds That May Have Benefited the United States

The benefits of rescue efforts flowed not only from the United States to other countries, the U.S. economy also benefited both directly and indirectly from rescue efforts that originated outside its borders. As discussed above, however, because the major non-U.S. rescue efforts were institution-focused as opposed to systemic, and because most of the failing institutions were not, in general, international operators, there was less potential for cash to flow to the United States from those rescues. Figure 17 details the potential extent of foreign rescue programs on the U.S. economy. As stated above, the size of an institution's foreign operations does not necessarily match the exact percentage of rescue funds that it directed abroad. Nonetheless, the table below illustrates the presence that major foreign financial institutions have in the United States or the Americas, and it is likely that the impact of the foreign rescue programs on the U.S. economy is roughly commensurate with that presence.

[351] The TLGP included two components: the Debt Guarantee Program (DGP) and the Transaction Account Guarantee program (TAG). *See, e.g.,* November Oversight Report, *supra* note 68, at 35. The foreign entities listed below issued debt under the DGP. In addition, approximately 60 foreign institutions participated in the TAG.

DEBT ISSUED BY FOREIGN BANKS UNDER THE TLGP PROGRAM

[Dollars in millions]

Parent Company Name	Amount Issued
BNP Paribas SA	1,000
Banco Bilbao Vizcaya Argentaria SA	470
Mitsubishi UFJ Finl Grp Inc	1,000
Banco Santander S.A.	1,600
HSBC Holdings plc	2,675
Total	**6,745**

Source: SNL Financial, TLGP Debt Issued (Aug. 3, 2010) (online at www.snl.com/interactive/TDGPParticipants.aspx). These figures include debt issued both by parent companies and by their subsidiaries.

[352] *See* Daniel K. Tarullo, member, Board of Governors of the Federal Reserve System, Remarks at the Symposium on Building the Financial System of the 21st Century, Armonk, New York, *Toward an Effective Resolution Regime for Large Financial Institutions* (Mar. 18, 2010) (online at www.federalreserve.gov/newsevents/speech/tarullo20100318a.htm) (hereinafter "Toward an Effective Resolution Regime for Large Financial Institutions") ("Entrenching too-big-to-fail status obviously . . . undermines market discipline, competitive equality among financial institutions of different sizes, and normal regulatory and supervisory expectations.").

FIGURE 17: FOREIGN GOVERNMENT ASSISTANCE WITH INTERNATIONAL IMPLICATIONS

Non-U.S. Firms	Government Aid[353] (millions of euros)		Total Revenue[354] (millions of euros)		U.S./Americas Revenue (2005–06% Total)
	Type[355]	Amount	2005	2006	U.S./N.A.*/ Americas**
ABN AMRO (Netherlands)[356]	C	2,600	22,334	27,641	N/A
AEGON (Netherlands)[357]	C	3,000	31,478	28,025	**52.5
Agricultural Bank of China (China)[358]	C	14,868	14,301	19,335	N/A
	A	94,754			
Anglo Irish Bank (Ireland)[359]	C	4,000	1,105	1,431	14.8
	N				
Allied Irish Bank (Ireland)[360]	G + C	3,500	3,784	4,486	2.8
Bank of Ireland (Ireland)[361]	G + C	3,500	3,562	3,596	N/A
BNP Paribas (France)[362]	C	5,100	26,219	32,429	**12.5
Commerzbank (Germany)[363]	G + C	8,200	7,311	9,419	**4.5
		15,000			
Credit Agricole (France)[364]	C	3,000	17,504	21,083	*6.4
Dexia (France/Belgium)[365]	G + C	6,400	6,112	7,163	N/A
		150,000			
Erste Bank (Austria)[366]	C	2,700	4,577	5,551	N/A
Fortis (Benelux)[367]	C	11,300	90,419	96,602	*3.9
	N	12,800			
Glitnir (Iceland)	N	.....	481	870	N/A
HRE (Germany)[368]	G	52,000	970	1,141	**16.5
IKB (Germany)[369]	C	3,500	754	685	**4.7
	G	12,000			
ING Groep (Netherlands)[370]	C	10,000	70,143	73,621	*38.4
	G	35,100			
Lloyds/HBOS (U.K.)[371]	C	19,000	43,711	43,138	N/A
Northern Rock (U.K.)	N	N/A	1,331	1,554	N/A
Kaupthing (Iceland)[372]	N	N/A	1,301	1,940	N/A
KBC (Belgium)[373]	C	7,000	9,242	10,763	N/A
	G	14,800			
Landsbanki (Iceland)[374]	N	N/A	809	1,021	N/A
Raiffeisen Zentralbank (Austria)[375]	C	1,750	2,069	3,298	N/A
Royal Bank of Scotland (U.K.)[376]	C	45,500	34,108	37,075	19.0
Société Générale (France)[377]	C	3,400	21,236	24,849	**11.7
UBS (Switzerland)[378]	C	7,200	28,042	32,571	38.0
	A	72,900			

[353] Data from the IMF unless otherwise noted.

[354] Data from Bloomberg, L.P. unless otherwise noted.

[355] A = Asset Purchase, C = Capital Injection or Loan, G = Liability Guarantee, N = Nationalization.

[356] Fortis's share of ABN AMRO was purchased by the Dutch Government in October 2008 as part of their nationalization of the Dutch branch of Fortis. The Dutch government provided funding to ABN AMRO of €2.6 billion ($3.7 billion) in mid-2009. ABN AMRO, *ABN€*AMRO—Fortis, 2007–2009 (online at www.abnamro.com/nl/images/020_About_ABN_ AMRO/020_History/020_Downloads/ABN_AMRO_ Fortis_2007_2010.pdf) (accessed Aug. 10, 2010) (in Dutch). Note: net and total revenue not available geographically for ABN AMRO: however, 15.9 percent of operating income in the 2005–2006 period came from the United States. ABN AMRO, *2006 20–F,* at F–27 (online at files.shareholder.com/downloads/ABN/984734423x0x145141/3741deb3–e6cb-4d27-9279-043b411b13fe/aa_20f_2006.pdf) (accessed Aug. 10, 2010).

[357] AEGON, *Annual Report, 2008* (online at www.aegon.com/Documents/aegon-com/Sitewide/Publications/Annual-reports/ Archive/2008-Annual-report.pdf) (accessed Aug. 10, 2010). The Americas is AEGON's largest market (online at www.aegon.com/Documents/aegon-com/Media/Fact-sheets/Fact-sheet-Americas.pdf). Total revenues based upon U.S. GAAP. Americas revenues includes AEGON USA and AEGON Canada. AEGON, *20–F 2006* (online at www.aegon.com/Documents/aegon-com/Sitewide/ Publications/SEC-filings/2006-SEC-filings-20-f.pdf).

[358] Yuan translated to euros on respective transaction dates of October 29, 2008 (capital injection RMB 130,000 million, or R19.1 billion) and November 21, 2008 (removal of RMB 815,695 million, or $120 billion, of bad assets). Daimler Annual Report, *supra* note 340, at 16. Total Revenue calculated as Interest Income + Fee and Commission Income + Other Operating Income + Investment Income + Subsidy Income + Non Operating Income. Agricultural Bank of China, *Annual Report 2006,* at 51 (online at www.abchina.com/en/about-us/ annual-report/2006/default.htm) (accessed Aug. 10, 2010).

[359] There was no monetary cap on the Irish government's guarantee. Department of Finance (Ireland), *Credit Institutions (Financial Support) Scheme 2008, Frequently Asked Questions* (Dec. 16, 2008) (online at www.finance.gov.ie/documents/publications/other/faqbankguar.pdf). Department of Finance (Ireland), *Minister's Statement* (Mar. 31, 2009) (online at www.finance.gov.ie/viewdoc.asp?DocID=5803); Department of Finance (Ireland), *Minister's Statement* (Jan. 15, 2009) (online at www.finance.gov.ie/viewdoc.asp?DocID=5627&CatID= 1&StartDate=01+January+2009&m=); Anglo Irish Bank, *Annual Report 2006,* at 65 (2007) (online at edgar.sec.gov/Archives/ edgar/vprr/07/9999999997-07-022766) (hereinafter ''Anglo Irish Bank Annual Report'').

[360] AIB Group, *Allied Irish Banks, P.L.C. Capital Update* (Feb. 12, 2009) (online at www.aib.ie/servlet/ContentServer?pagename= PressOffice/ AIB_Press Releas/aib_po_d_press_releases-0_08&cid=1233740850586&poSection=AR&poSubSection=paDA&position=notfirst&rank=top&month= 02&year=2009); Anglo Irish Bank Annual Report, *supra* note 359, at 65.

[361] Net revenue not available geographically for Bank of Ireland, but 2.9 percent of total operating income was U.S.-based over 2005–2006. Bank of Ireland, *2006 Form 20–F* (Mar. 2007) (online at www.secinfo.com/ d14D5a.u3qF3.htm#_tx94774_51).

[362] BNP Paribas, *Communiques de Press* (Mar. 31, 2009) (online at www.bnpparibas.com/fr/actualites/communiques-presse.asp?Code= LPOI-7QNPDY&Key=Emission%20de%205,1%20milliards%20d'euros%20d'action%20de%20pr%C3%A9f%C3%A9rence%20dans%20le%20cadre% 20du%20Plan%20fran%C3%A7ais%20de%20soutien% 20%C3%A0%20l'%C3%A9conomie).

[363] Commerzbank Aktiengesellschaft, *Credit Linked Note Programme* (Aug. 1, 2008) (online at www.commerzbank.com/media/aktionaere/emissionsprogramme/cln_programme/Nachtrag_20090512.pdf).

[364] Europa, *Press Release: State Authorizes Modification* (Jan. 28, 2009) (online at europa.eu/rapid/pressReleasesAction.do?reference=IP/09/158&format=HTML&aged=0&language=EN&guiLanguage=fr).

[365] Dexia's capital increase of €6.4 billion ($8.7 billion) was contributed by Belgium (€3 billion or $4.1 billion), France (€3 billion or $4.1 billion) and Luxembourg (€376 million or $513 million). Europa, ''State Aid: Commission approves joint aid from Belgium, France and Luxembourg to rescue Dexia'' (online at europa.eu/rapid/ pressReleasesAction.do?reference=IP/08/1745&format=HTML&aged=0&language). Note: net revenue not available geographically for Dexia SA, but 18.3 percent of net income was U.S.-based over 2005–2006. Dexia S.A., *Annual Report 2006* (online at www.dexia.com/docs/2007/20070509_AG/annual_ report/en/ra2006en.htm) (accessed Aug. 11, 2010).

[366] Erste Group, *Investor Information* (Oct. 30, 2008) (online at www.erstegroup.com/sPortal/download?document Path=ebgroup_en_0196_ACTIVE%2FDownloads%2FInvestor_ Relations%2FIR_News_2008eng%2FIR_ News_081030en.pdf). The Erste Group (Erste Bank) states that it operates in a single business segment, and a single geographical segment: the provision of banking services in the Republic of Croatia. Erste Bank, *Annual Report 2006* (online at www.erstebank.hr/godisnja_izvjesca/ annual_report_2006.pdf) (accessed Aug. 11, 2010).

[367] On September 28, 2008, the Netherlands invested €4.0 billion ($5.8 billion), Belgium invested €4.7 billion ($6.9 billion), and Luxembourg invested €2.5 billion ($3.7 billion), and each acquired a 49.9 percent stake in their respective country's sector of Fortis. On October 3, 2008, the Dutch government fully acquired their share of Fortis, including its stake in ABN AMRO, for a total of €16.8 billion ($23.4 billion) and nationalized it. The Belgian government purchased the remainder of its portion on October 5, 2008, and immediately sold 75 percent of Fortis Bank SA/NV and 16 percent of Fortis Banque Luxembourg to BNP Paribas, as well as 100 percent of Fortis Insurance Belgium for €5.73 billion ($7.86 billion). Letter from Nathan J. Greene, partner, Shearman & Sterling, to Douglas J. Scheidt, associate director and chief counsel, U.S. Securities and Exchange Commission, *Fortis Investment Management SA—No-Action Request* (Jan. 27, 2009) (online at www.sec.gov/divisions/investment/noaction/2009/ fortisgroup012709-incoming.pdf); Government of the Netherlands, *Dutch State Acquires Fortis Nederland* (Oct. 3, 2008) (online at government.nl/News/Press_releases_and_ news_items/2008/October/Dutch_State_ acquires_Fortis_Nederland); Europa, *State Aid: Commission Clears State Aid to Rescue and Restructure Fortis Bank and Fortis Bank Luxemburg* (Dec. 3, 2008) (online at europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1884). Net Revenue is only available for the Banking segment and is €10,166 million ($12.8 billion) for 2006 and €8,782 million ($10.9 billion) in 2005. Fortis, *Annual Report 2006,* at 138 (online at www.ageas.com/Documents/Financial _Statements_2006_UK_lrs.pdf) (accessed Aug. 11, 2010).

[368] Additionally, on March 28, 2009, SoFFin recapitalized Hypo Real Estate Group by subscribing 20 million shares. Hypo Real Estate, *Press Release* (Apr. 14, 2009) (online at www.hyporealestate.com/eng/pdf/PI-Verlaengerung _SoFFingarantien final_engl.pdf); Bank for International Settlements, *An Assessment of Financial Sector Rescue Programmes,* BIS Papers No. 48 (July 2009) (online at www.bis.org/publ/bppdf/bispap48.pdf).

[369] Deutsche Industriebank, *Annual Report 2007/2008* (online at www.ikb.de/content/en/ir/financial_ reports/annual_report_2007_2008/Konzern_englisch_080814_sicher.pdf) (accessed Aug. 10, 2010).

[370] Netherlands Ministry of Finance, *Press Release* (Oct. 19, 2008) (online at www.minfin.nl/english/News/Newsreleases/2008/10/Government_reinforces_ING's_core_capital_by_EUR_10_billion).

[371] While detailed information on segmented revenue was not available for 2005 and 2006, Lloyds did detail their foreign loans and advances to banks and customers by region. From 2005 to 2006, foreign loans to banks and customers in the United States accounted for 40.3 percent of all their foreign loans and advances. Lloyds TSB, *2006 Form 20F,* at 45 (June 8, 2007) (online at www.lloydsbankinggroup.com/media/pdfs/investors/2006/2006_LTSB_Form_20F.pdf).

[372] Kaupthing specifically says that their four major areas of operation are Iceland, the United Kingdom, Scandinavia, and Luxembourg. Therefore, it can be inferred that they do not derive much (if any) revenue from their operations in the United States. Kaupthing, *2006 Annual Report,* at 144 (2006) (online at www.kaupthing.com/library/7493).

[373] In its 2006 Annual Report, KBC Bank notes that faced over €4 billion ($5 billion) in risk exposure in North America, but fails to divide its revenues by geographic segment. KBC, *KBC Annual Report 2006,* at 67 (2006) (online at tools.euroland.com/arinhtml/bkbc/2006/ar_eng_2006/index.htm).

[374] Net operating revenues for 2005 of 60,978 million kronor ($972 million) translated to EUR. Landsbanki, *2006 Annual Report* (online at www.landsbanki.is/Uploads/documents/ArsskyrslurOgUppgjor/Landsbanki_Annual_Report_2006.pdf) (accessed Aug. 11, 2010).

[375] Raffeisen Zentralbank Austria AG, *Press Release* (2009) (online at www.rzb.at/eBusiness/rzb_template1/102329671150410232967115 95_1024688700058_525822672865827658-554881300075676209-NA-NA-DE.html).

[376] The Royal Bank of Scotland received £13 billion ($19 billion) in cash, £6.5 billion ($9.4 billion) in fees and exchange, and an additional £25.5 billion ($36.8 billion) in 2009. *See* Royal Bank of Scotland Group, *2008 Annual Results: Analysts Presentation* (Feb. 26, 2009) (online at files.shareholder.com/downloads/RBS/973615354x0x285293/ 04846b7d-2923-4886845ffc617b8aeb02/2008_ Annual_Results_26_February_2009_Transcript.pdf); BBC News, *UK Banks Receive* £37bn Bailout (Oct. 13, 2008) (online at news.bbc.co.uk/2/hi/business/7666570.stm); Royal Bank of Scotland Group, *Royal Bank of Scotland Group PLC—General Meeting Statement* (Dec. 15, 2009) (online at files.shareholder.com/downloads/RBS/973615354x0x338886/ 22510ae8-2685-4173-b7e26d6b71f1f1eb/RBS_News_2009_ 12_15_General_announcements.pdf).

[377] These funds came in two rounds: December 2008 and May 2009. David Gauthuer-Villars, *Société Générale Looks to Repay France's Aid,* Wall Street Journal (Oct. 7, 2009) (online at wsj.com/article/SB125480635 3 21166897.html).

[378] UBS capitalized a fund with $6 billion of equity in addition to $54 billion from the Swiss National Bank to create a fund to buy risky assets off UBS's books. UBS, *Financial Reporting: Fourth Quarter 2008* (Feb. 10, 2009) (online at www.ubs.com/1/ShowMedia/investors/quarterly_ reporting?contentId=160658&name=q4report.pdf) (hereinafter ''UBS Financial Reporting: Fourth Quarter 2008''); UBS, *Quarterly Reporting: Changes in 2008* (online at www2.ubs.com/1/e/investors/08q3/0003.html) (accessed Aug. 10, 2010).

As the table above suggests, the benefits of rescue efforts did not flow only from the United States to other countries—the U.S. economy also benefited both directly and indirectly from rescue efforts that originated outside its borders. As with rescue efforts originated in the United States, foreign rescue efforts may produce a two-way flow of funds: on the one hand, counterparty relationships may mean that foreign governments provide money to domestic institutions that then flows out of the country, but on the other hand, counterparty relationships may mean that funds provided to foreign institutions may flow back into the domestic economy. In contrast to the U.S. institutions listed in Figure 15 above, many of the institutions that benefited from the largest non-U.S. rescues had limited foreign operations (or at least limited operations in the United States). The following list highlights some of the effects that may have been felt in the United States as a result of the rescue efforts undertaken by foreign governments.

- **Royal Bank of Scotland.** RBS operates in the United States primarily through its subsidiary Citizens Financial Group (Citizens), which is a large commercial bank with retail and corporate banking operations in several regions of the United States.[379] At the end of 2008, the company's U.S. operations consisted of £126.2 billion ($183 billion) in loans and advances to customers.[380] RBS received £45.5 billion ($71 billion) in government assistance. In light of its U.S. operations, it is possible that a portion of this assistance helped to recapitalize Citizens, which in turn would have provided meaningful support to U.S. customers.[381]
- **UBS.** UBS operates a large institutional securities and investment banking operation in the United States.[382] In 2007 and 2008, UBS recorded a loss of $34 billion associated with its exposure to the U.S. residential mortgage market.[383] On October 16, 2008, UBS reached an agreement with the Swiss National Bank (SNB) to transfer up to $60 billion of illiquid securities and other assets off of UBS's balance sheet and into a fund managed by the SNB. SNB financed the fund with a loan of up to 90 percent of the purchase price, while the remaining 10 percent was provided by UBS through equity contributions. The transfer included $31 billion of primarily cash securities in U.S. RMBS, U.S. CMBS, U.S. student loan auction rate certificates and other student loan-backed securities, and a U.S. reference-linked note program.[384] Approximately $8 billion in U.S. subprime and Alt-A MBS was transferred into the fund.[385] This close link between U.S.-based assets and the Swiss government's rescue program make it very likely that the program benefited the U.S. economy by providing a market for otherwise illiquid U.S.-based securities.
- **ING.** The Dutch company Internationale Nederlanden Groep (ING) operates in the United States as a commercial investment bank, a life insurance and retirement services provider, and an internet bank. ING, which received over €10 billion ($12.8 billion) from the Dutch government in October 2008, saw its revenue decrease dramatically in the United States and North America between 2008 and 2009.[386] ING's U.S. operations had more than €25 billion ($35.5 billion) in exposures

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[379] Royal Bank of Scotland Group, *Annual Report for Foreign Private Issuers (20F),* at 245 (Apr. 29, 2009) (online at www.investors.rbs.com/our_performance/secfiling.cfm?filingID=950103_09_966).

[380] *Id.* at 256.

[381] *See id.* at 265 ("Under current Federal Reserve policy, the Group is required to act as a source of financial strength for its U.S. bank subsidiaries. Among other things, this source of strength obligation could require the Group to inject capital into any of its U.S. bank subsidiaries if any of them became undercapitalised.").

[382] UBS also acquired the asset management firm PaineWebber (now known as UBS Financial Services, Inc.) in 2000. In 2006, UBS Financial Services, Inc. had $62.7 billion in assets under management. SNL Financial.

[383] UBS Financial Reporting: Fourth Quarter 2008, *supra* note 378, at 73.

[384] UBS, *UBS Further Materially De-risks Balance Sheet through Transaction with Swiss National Bank* (Oct. 16, 2008) (online at www.ubs.com/1/e/investors/releases?newsId=154213).

[385] Swiss National Bank, *SNB StabFund Concludes Transfer of UBS Assets* (Apr. 3, 2009) (online at www.snb.ch/en/mmr/reference/pre_20090403/source/pre_20090403.en.pdf).

[386] ING Group, *Transactions With the Dutch State* (Mar. 26, 2010) (online at www.ing.com/group/showdoc.jsp?docid=363620_EN&menopt=ivr1|fis); ING Group, *2009 Annual Report,* at 193 (2009) (online at www.ing.com/cms/idc_cgi_isapi.dll?IdcService=GET_FILE&dDocName=440367_EN&RevisionSelectionMethod=latestReleased).

to the U.S. residential market.[387] These substantial exposures to the U.S. housing market make it likely that rescue funds provided to the parent company may have indirectly benefited the U.S. economy.

- **Credit Agricole.** Credit Agricole, Europe's largest retail bank, received €3 billion ($3.8 billion) in subordinated debt from the French government in November 2008. In their North American asset management, private bank, and investment bank branches, they employ 1,800 workers. During the 2005–2006 period, an average of 8 percent of Credit Agricole's revenue derived from its operations in North America.[388] Additionally, as of December 2008, 11 percent of its commercial lending exposures to non-bank customers were in the United States.[389]

Certain U.S. companies that had operations abroad also benefited from rescue programs by other nations. For instance, in 2008 and 2009, the governments of Canada and Ontario announced loan programs totaling over $5 billion to assist GM and Chrysler. The loans, repayable in three separate installments over eight years, put stringent limitations on dividend payments as well as executive privileges and compensation.[390]

3. The Largest, Systemically Significant Institutions and the International Flow of Rescue Funding

U.S. bank-owned assets abroad, which total $3.8 trillion, account for approximately 20 percent of all U.S.-owned assets abroad at the end of 2007. Likewise, as shown in Figure 18 below, foreign bank-owned assets in the United States, which total $4.0 trillion, account for roughly 20 percent of all foreign-owned holdings in the United States.

FIGURE 18: CROSS-BORDER ASSET HOLDINGS, YEAR-END 2007 [391]

[*Dollars in trillions*]

	Total	Financial Derivatives	Securities (non-U.S. Treasury)	Claims/Liabilities of U.S. Banks	Financial Sub-Total
U.S.-Owned Assets Abroad	18.3	2.6	6.8	3.8	13.2
Foreign-Owned Assets in the United States	20.4	2.5	6.2	4.0	12.7

[391] U.S. Bureau of Economic Analysis, *Table G.1, International Investment Position of the United States at Year-End 2007 and 2008* (June 2010) (online at www.bea.gov/scb/pdf/2010/06%20June/D%20Pages/0610dpg_g.pdf) (accessed Aug. 10, 2010).

Importantly, 80 percent of these bank assets represent cross-border holdings owned by the bank, with the remaining 20 percent reflecting positions held on behalf of customers, such as short-term securities (assets) and deposits (liabilities). Of this 80 percent—the positions owned by the bank—more than two-thirds are between foreign affiliates of a U.S.-owned institution, or U.S. affiliates of a foreign-owned institution (i.e., a multinational bank's intercompany

[387] ING Group, *2008 Annual Report,* at 260 (2008) (online at www.ing.com/group/showdoc.jsp?docid=372285_EN&menopt=ivr1|pub1|arp&lang=en).

[388] Bloomberg Financial.

[389] Credit Agricole S.A., *Registration Document and Annual Report 2009* (2009) (online at www.credit-agricole.com/en/content/download/1900/16498/version/1/file/2009_Registration_Document.pdf); Daimler Annual Report, *supra* note 340.

[390] Office of the Premier of Ontario, *Government Support to the Auto Industry* (Dec. 20, 2008) (online at www.news.ontario.ca/opo/en/2008/12/government-support-to-the-auto-industry.html).

claims).[392] By definition, the institutions included in these data represent the largest, most systemically important banks and securities firms in both the United States and Europe.

A review of the international operations of major TARP recipients as well as leading foreign firms helps illustrate the far-reaching benefits from the U.S. government's assistance. As discussed in greater detail in Section B, firms such as Citigroup, JPMorgan Chase, Goldman Sachs, and Morgan Stanley have significant operations overseas, not just as core components in the international financial market plumbing, but also through global treasury services for investors and corporations (Citigroup and JPMorgan Chase), and significant retail banking operations in Asia and Latin America (Citigroup). Other U.S. firms, such as State Street (43 percent non-U.S. revenue in 2006) and Bank of New York Mellon (30 percent non-U.S. revenue in 2006), provide trust bank and global custodial services for corporations and investment managers throughout the world. Even American Express, a financial institution associated primarily with the U.S. retail market, has significant non-U.S. operations (31 percent), reflecting global transaction and payment operations that serve international commercial and retail customers.

This is a two-way street, as foreign-headquartered banks also rely heavily on the U.S. institutional and retail market. Credit Suisse, Deutsche Bank, and UBS boast significant operations in the U.S. capital markets, via their investment banking, trading, and prime brokerage arms. Additionally, UBS and HSBC have meaningful retail operations in the United States—UBS via the high-net-worth Paine Webber platform, and HSBC through its more mainstream banking and consumer finance operations.

While useful data on intercompany capital flows during the crisis are limited, the Federal Reserve publishes aggregate data on flows from U.S. banks to their foreign parents and from foreign banks to their U.S. parents. The Federal Reserve cited "unusual flows" during the crisis, reflecting overseas demand to fund dollar assets and a pronounced pullback in cross-border positions based on heightened risk aversion, in the context of a concerted effort aimed at "channeling liquidity home to protect the parent bank."[393] These cross-border, intercompany flows, including much smaller flows to non-affiliates, are categorized into three distinct stages of the crisis. (Net shifts of U.S.-owned, Europe-owned and other foreign-owned institutions during these stages are illustrated in Figure 19 below.)

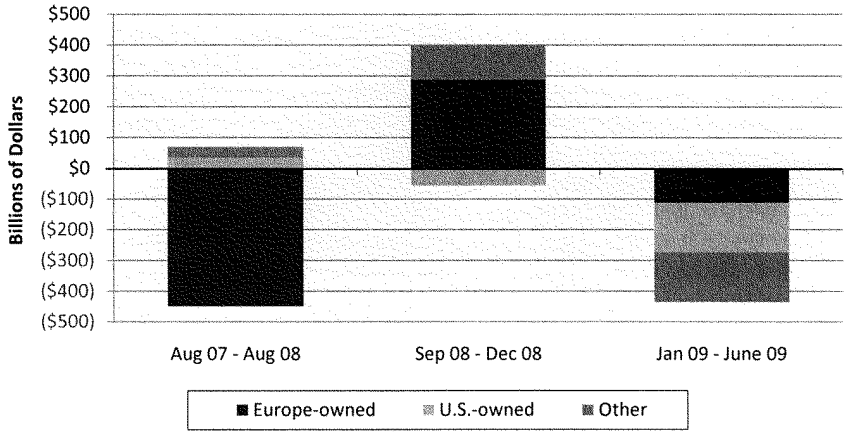
- Initial Phase, August 2007 to August 2008: A $380 billion increase in net lending abroad was driven by U.S. affiliates of European institutions, which as a group accounted for a $450 billion increase in overseas lending. Foreign affiliates of U.S. parents also channeled funds back to the United States, although in a much smaller amount ($36 billion), presumably to shore up the parent's liquidity base.

[392] Gross cross-border positions of U.S. and European-owned banks in the United States approximate one another, whereas the balance (less than 10 percent) reflects positions for banks with headquarters in Asia, Canada, and Australia. Carol C. Bertaut and Laurie Pounder, *The Financial Crisis and U.S. Cross-Border Financial Flows,* at A156 (Nov. 2009) (online at www.federalreserve.gov/pubs/bulletin/2009/pdf/bulletin_article_november_2009a1.pdf).

[393] *Id.* at A147, A160.

- Crisis Peak, September 2008 to December 2008: There was a reversal of $346 billion in net lending, as U.S. firms hoarded dollars and short-term funding markets collapsed, whereas European parents of U.S. affiliates took advantage of new dollar funding from their central banks (via swap lines with the Federal Reserve), easing the pressure on U.S. affiliates to send dollars home, resulting in $288 billion in net inflows to European-owned banks in the United States.
- Final Phase, January 2009 to June 2009: There was a resumption of net lending abroad, with a $436 billion increase in net outflows as dollar interbank lending markets improved, replacing a reliance on foreign central bank dollar liquidity programs.

FIGURE 19: NET FLOWS OF U.S.-OWNED AND EUROPE-OWNED BANKS, AUGUST 2007–JUNE 2009[394]



While the Federal Reserve data outlined above provide a broad overview of cross-border financial transactions involving U.S. affiliates and their foreign parents, and involving foreign affiliates and their U.S. parents, these data should not be viewed as a monolithic representation of intercompany flows within individual institutions during the crisis. Financial disclosures of U.S.-owned and foreign-owned banks offer limited insight into inter-company flows during the crisis (or any period for that matter), limiting the ability to track the flow of TARP funds to overseas operations and international rescue funding to U.S. operations. However, in some instances a reconstruction of rescue funds is possible, as with AIG and to a lesser extent General Motors and Chrysler. Given that many of the firms that received government assistance were interconnected with the global financial framework, just as AIG was, it is reasonable to assume that U.S. and foreign taxpayer assistance to systemically important multinational financial firms benefited counterparties, investors, and economies far beyond the home coun-

[394] A positive value indicates a net financial inflow to the United States, and a negative value indicates a net financial outflow from the United States. *Id.* at A158, A160.

try. In the case of the largest U.S. and foreign investment banks (such as Morgan Stanley, Citigroup, and Deutsche Bank), their operations were far more intertwined and of much greater scale globally than Lehman Brothers' were.

E. Cooperation and Conflict in the Different Government Responses to the Crisis

Throughout the financial crisis, the Federal Reserve and Treasury have taken a number of actions to support financial stabilization internationally. Federal Reserve Chairman Ben S. Bernanke has commented that "a clear lesson of the recent period is that the world is too interconnected for nations to go it alone in their economic, financial, and regulatory policies. International cooperation is thus essential if we are to address the crisis successfully and provide the basis for a healthy, sustained recovery."[395]

In this section of the report, the Panel evaluates the extent of international cooperation with respect to financial stabilization since the emergence of the financial crisis in the summer of 2007 and assesses whether anything could have been done differently.

1. International Coordination and Treasury's Role in Supporting Financial Stabilization Internationally

a. Legal Authority

Section 112 of EESA provides a legal authority and framework for Treasury's role in supporting financial stabilization internationally during the financial crisis. Section 112 requires the Secretary of the Treasury to "coordinate, as appropriate, with foreign financial authorities and central banks to work toward the establishment of similar programs by such authorities and central banks. To the extent that such foreign financial authorities or banks hold troubled assets as a result of extending financing to financial institutions that have failed or defaulted on such financing, such troubled assets qualify for purchase under section 101."[396]

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[395] Ben S. Bernanke, chairman, Board of Governors of the Federal Reserve System, The Stamp Lecture at the London School of Economics, *The Crisis and the Policy Response* (Jan. 13, 2009) (online at www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm).

[396] 12 U.S.C. § 5222. Section 101 of EESA authorized the Secretary to establish the TARP "to purchase and to make and fund commitments to purchase, troubled assets from any financial institution, on such terms and conditions as are determined by the Secretary, and in accordance with this Act and the policies and procedures developed and published by the Secretary."

With respect to the latter provision of Section 112 (the authorization for Treasury to purchase troubled assets from foreign financial authorities or banks acquired by extending financing to subsidiaries of U.S.-based financial institutions that have failed or defaulted on the financing arrangement), Treasury states that no such purchases have been made. Treasury conversations with Panel staff (July 22, 2010).

During the Congressional debates surrounding the passage of EESA, several members of Congress voiced concern with the latter portion of this statutory provision, arguing that the language was very expansive and open-ended. On October 1, 2008, Senator Richard Shelby (R–AL) noted that "[u]nder a provision hidden deep in the legislation, the Treasury Secretary also has the authority to purchase troubled assets from foreign central banks and governments." Statement of Sen. Shelby, *Congressional Record,* S10240 (Oct. 1, 2008). On the same day, Senator Arlen Specter (then-R–PA) stated that "[t]he legislation contains authority for the Treasury Secretary to compensate foreign central banks under some conditions. It provides that troubled assets held by foreign financial authorities and banks are eligible for the TARP program if the banks hold such assets as a result of having extended financing to financial institutions that have failed or defaulted. Had there been an opportunity for floor debate, that provision might have been sufficiently unpopular to be rejected or at least sharply circumscribed with conditions." Statement of Sen. Specter, *Congressional Record,* S10279 (Oct. 1, 2008).

Continued

Treasury states that it has coordinated extensively with its foreign counterparts throughout the financial crisis, and that this particular statutory provision neither added to Treasury's mandate nor changed its approach with respect to international affairs.[397] Treasury's view is that the inclusion of this provision, therefore, resulted in no different behavior on the part of Treasury than what it was already doing in the international realm.

While this particular statutory provision is relatively short in comparison to other key EESA provisions, its substance and inclusion are telling for several reasons.

First, given the Federal Reserve's role as the U.S. central bank and the plethora of actions it has taken during the financial crisis, it is perplexing that the statute does not direct the Secretary of the Treasury to consult with the Federal Reserve when coordinating with foreign financial authorities and central banks. While the Federal Reserve and Treasury have very different roles (the TARP was established to give Treasury the ability to purchase equity in a financial institution, and the Federal Reserve is limited to making loans), given the complementary relationship between these roles, it seems important that they coordinate their actions. It is unclear whether this omission was deliberate (i.e., Congress expected that Treasury and the Federal Reserve would collaborate closely but wanted one voice to represent U.S. interests) or due simply to a drafting error.

Second, since the financial crisis developed into a global problem, Congress intended for Treasury to coordinate with its foreign counterparts and likely thought that a collaborative effort would both minimize the likelihood that one country would be advantaged over others and send a strong signal to the markets.

Third, Treasury's authority to coordinate with foreign finance ministers and central banks is broad and expansive, and is not limited to the design of programs that are exact replicas of the TARP as implemented in the United States. While the statute authorizes Treasury to coordinate with foreign financial authorities and central banks to establish TARP-like programs in other countries, the Panel notes that the U.S. approach allows for a number of different policy and programmatic responses, such as asset purchases, capital injections, increased deposit insurance, and government guarantees.

Fourth, Congress' authorization for the Treasury Secretary to purchase troubled assets from foreign financial authorities or banks acquired as a result of extending financing to subsidiaries of U.S.-based financial institutions that have failed or defaulted on the financing arrangement seems to have been included under the

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On October 2, 2008, however, Representative Roy Blunt (R–MO) introduced a letter from Secretary Paulson in which Paulson pledged to limit Treasury's role in dealing with foreign financial institutions, in accord with the requirements of EESA, so that Treasury's actions would be limited to foreign entities with assets acquired from U.S. institutions. Secretary Paulson reminded members of Congress that "[t]he Act requires that eligible financial institutions must be established and regulated and have significant operations in the United States" [in accord with the definition of "financial institution" in Section 3(5) of EESA] and that "it is the intention of the Department of the Treasury that all mortgages or mortgage-related assets purchased in the Troubled Asset Relief Program will be based on or related to properties in the United States." Statement of Rep. Blunt, *Congressional Record,* H10757 (Oct. 3, 2008).

[397] Treasury conversations with Panel staff (July 22, 2010); Clay Lowery, assistant secretary of the Treasury for international affairs (Nov. 2005–Jan. 2009), conversations with Panel staff (July 23, 2010).

assumption that Treasury would conduct an asset purchase program (as it originally contemplated and as described in Sections 101 and 113 of EESA), rather than capital injections, since asset purchases work better under a reverse auction mechanism. In Congress' view, having more sellers in an asset pool under a reverse auction-type mechanism might have produced better results. The greater the participation in an auction, the better odds there are for lower pricing, which protects the interests of the taxpayer. The significance and relevance of this provision, however, were diminished once Treasury made the strategic decision to pursue capital injections instead of purchasing troubled assets.[398]

Finally, while the inclusion of this section is explicit evidence of Congress' desire for Treasury to play a pivotal role in supporting financial stabilization internationally, Congress did not provide any content to the term "coordinate," so the provision does not impose any meaningful obligation on the part of Treasury. This may in part explain Treasury officials' particular interpretation of this provision, as discussed above.

b. Coordination Concerning the Creation of TARP-like Programs and Support for Banking Industry

During the latter part of 2008, various finance ministers and central bank governors focused almost exclusively on emergency rescues of their respective banking systems.

As discussed above (and as confirmed in Panel staff conversations with experts and policymakers), countries generally responded to the financial crisis by developing rescue packages focused on systemic issues within their jurisdictions rather than focusing heavily on specific institutions.[399] There were, however, several exceptions. Beginning in early 2008 and continuing through mid-September, the United States acted largely on a case-by-case basis in response to the increasing stresses on financial institutions including Bear Stearns, Lehman Brothers, and AIG. In March 2008, the Federal Reserve Bank of New York (FRBNY) extended credit to Maiden Lane LLC in order to facilitate the merger of Bear Stearns and JPMorgan Chase. In mid-September 2008, the Federal Reserve and Treasury had to face the failure of Lehman Brothers (after the United Kingdom's Financial Services Authority (FSA), the regulator of all providers of financial services in the United Kingdom, declined to approve Barclays' acquisition of Lehman), and the rescue of AIG in light of the systemic risks they believed its failure would impose.[400] According to then-Treasury Secretary Henry M. Paulson, Jr., these steps were "necessary but not suffi-

[398] Treasury conversations with Panel staff (July 22, 2010).

[399] Treasury conversations with Panel staff (July 22, 2010); Clay Lowery, assistant secretary of the Treasury for international affairs (Nov. 2005–Jan. 2009), conversations with Panel staff (July 23, 2010); Dr. C. Fred Bergsten, director of the Peterson Institute for International Economics and former assistant secretary of the Treasury for international affairs, conversations with Panel staff (July 29, 2010); Simon Johnson, Ronald A. Kurtz Professor of Entrepreneurship at the Sloan School of Management at MIT and former chief economist at the IMF, conversations with Panel staff (July 30, 2010). For further discussion on the interventions taken by countries across the globe, *see* Sections C.1 and C.2, *supra*.

[400] For a comprehensive discussion and analysis of the government's rescue of AIG, *see* June Oversight Report, *supra* note 10.

cient,"[401] prompting his joint decision with Chairman Bernanke to shift gears and focus on formulating a comprehensive approach to resolve financial market stresses. On September 20, 2008, Secretary Paulson and Chairman Bernanke asked Congress "to take further, decisive action to fundamentally and comprehensively address the root cause of this turmoil"[402] by submitting legislation requesting authority to purchase troubled assets from financial institutions in order to promote market stability. On October 3, 2008, after approval from both houses of Congress, President George W. Bush signed EESA into law.

In a display of international partnership at a time when global finance markets were severely strained, the G–7 finance ministers and central bank governors held a meeting at the U.S. Department of the Treasury during the weekend of October 10–12, 2008 (one week after the passage of EESA and amidst the IMF and World Bank annual meetings), to discuss economic conditions, financial market developments, and individual and collective policy responses. According to then Undersecretary of the Treasury for International Affairs David H. McCormick, one of the central messages for the weekend was that "the turmoil is a global phenomena."[403] At this time, Mr. McCormick referenced the recent passage of EESA, stated that other countries were "considering appropriate programs given their national circumstances," and said that Treasury looked forward "to working with them as they move forward with their plans." During the meeting, then-Secretary Paulson briefed his foreign counterparts on the U.S. financial rescue efforts, including strategies to use the EESA authority to purchase and insure mortgage assets and purchase equity in financial institutions. Secretary Paulson and Undersecretary McCormick maintained regular contact with their G–7 and other international counterparts in order to strengthen international collaboration efforts to stabilize financial markets and restore confidence in the global economy.[404] It appears that the existence of the TARP, therefore, might have served to enhance the negotiating position of the U.S. government (at least in a limited way) as it demonstrated the willingness of U.S. officials to be aggressive and forceful in committing a significant amount of resources to confront a deepening crisis.[405]

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[401] Senate Committee on Banking, Housing, and Urban Affairs, Written Testimony of Henry M. Paulson, Jr., secretary, U.S. Department of the Treasury, *Turmoil in U.S. Credit Markets: Recent Actions regarding Government Sponsored Entities, Investment Banks and other Financial Institutions*, 110th Cong. (Sept. 23, 2008) (online at banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=04ba224a-4cee-463e-b1d8-0cd771e85bd4).

[402] *Id.*

[403] David H. McCormick, undersecretary for international affairs, U.S. Department of the Treasury, Prepared Statement in Advance of G–7 Finance Ministers and Central Bank Governors Meeting (Oct. 8, 2008) (online at www.treas.gov/press/releases/hp1190.htm).

[404] Treasury conversations with Panel staff (July 22, 2010).

[405] Clay Lowery conversations with Panel staff (July 23, 2010); Sabina Dewan, associate director of international economic policy, and Lauren D. Bazel, associate director of government affairs, Center for American Progress, conversations with Panel staff (July 26, 2010); Adam Posen, senior fellow at the Peterson Institute for International Economics (PIIE) and member of the Monetary Policy Committee of the Bank of England, conversations with Panel staff (July 27, 2010); Vincent Reinhart, former director of the Federal Reserve Board's Division of Monetary Affairs and resident scholar at the American Enterprise Institute for Public Policy Research, conversations with Panel staff (July 19, 2010). Mr. Reinhart held a number of senior positions in the Divisions of Monetary Affairs and International Finance at the Federal Reserve Board and served for the last six years of his Federal Reserve career as secretary and economist of the Federal Open Market Committee. For further discussion concerning the role of the TARP in international negotiations, *see* Section E.3.c, *infra*.

At the meeting, the G–7 finance ministers and central bank governors endorsed an aggressive five-part plan to guide individual and collective policy steps to provide liquidity and strengthen the capital base of financial institutions. This plan included, among other items, agreements to "[t]ake decisive action and use all available tools to support systemically important financial institutions and prevent their failure," "[t]ake all necessary steps to unfreeze credit and money markets and ensure that banks and other financial institutions have broad access to liquidity and funding," and "[e]nsure that our banks and other major financial intermediaries, as needed, can raise capital from public as well as private sources, in sufficient amounts to re-establish confidence and permit them to continue lending to households and businesses."[406] Then-Secretary Paulson also referenced the need to "continue to closely coordinate our actions and work within a common framework so that the action of one country does not come at the expense of others or the stability of the system as a whole," and noted how it has never "been more essential to find collective solutions to ensure stable and efficient financial markets and restore the health of the world economy."[407] Perhaps most importantly, this meeting presented a platform through which the G–7 finance ministers and central bank governors could present a common front and stand behind a common strategy at a time when aggressive and forceful action could help calm the financial markets.

While endorsing a coordinated approach to the financial crisis and outlining a broad set of principles, the G–7 leaders, however, failed to announce any concrete steps, underscoring the challenge of crafting a global plan to address turmoil in the financial markets. On the one hand, the lack of specificity has garnered some criticism from those who argue that these types of vague piecemeal responses fail to provide certainty to the markets. Simon Johnson, the Ronald A. Kurtz Professor of Entrepreneurship at the Sloan School of Management at MIT and former chief economist at the IMF, argues that "[y]ou need specific, concrete steps, not a list of principles that are obvious and everyone can easily agree to."[408] In addition, Federal Reserve Vice Chairman Donald L. Kohn commented that "[a]lthough most countries wound up in a similar place, the process was not well coordinated, with action by one

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According to Mr. Reinhart, while the TARP (and the stress tests in particular) signaled to the world that the United States was aggressive and organized enough to commit significant resources to confront the financial crisis (which enhanced the U.S. negotiating position), over time, the U.S. negotiating position was diminished as the TARP was implemented, and U.S. officials became less willing to commit additional resources.

[406] U.S. Department of the Treasury, *G–7 Finance Ministers and Central Bank Governors Plan of Action* (Oct. 10, 2008) (online at www.treas.gov/press/releases/hp1195.htm). The G–7 also agreed to:

1. Ensure that our respective national deposit insurance and guarantee programs are robust and consistent so that our retail depositors will continue to have confidence in the safety of their deposits.

2. Take action, where appropriate, to restart the secondary markets for mortgages and other securitized assets. Accurate valuation and transparent disclosure of assets and consistent implementation of high quality accounting standards are necessary.

[407] U.S. Department of the Treasury, *Statement by Secretary Henry M. Paulson, Jr. Following Meeting of the G7 Finance Ministers and Central Bank Governors* (Oct. 10, 2008) (online at www.treas.gov/press/releases/hp1194.htm) (hereinafter "Paulson October 2008 Statement").

[408] Anthony Faiola and Neil Irwin, *World Leaders Offer Unity But No Steps to Ease Crisis,* Washington Post (Oct. 12, 2008) (online at www.washingtonpost.com/wp-dyn/content/story/2008/10/11/ST2008101102372.html) (hereinafter "World Leaders Offer Unity But No Steps to Ease Crisis") (including remarks from an interview with Professor Johnson).

country sometimes forcing responses by others."[409] On the other hand, the flexibility contained within the broad set of principles outlined by the G–7 provided each country with the discretion to implement solutions to the crisis based upon their evaluation of what was best for their own banking sector and their domestic economy. According to Shoichi Nakagawa, the former Japanese finance minister, "[e]ach of the G–7 nations knows what has to be done, what the government needs to do. Each country understands what needs to be done."[410]

Given that many countries had banking systems with different levels of impairment, a single coordinated response may have hindered their ability to formulate targeted responses to their unique economic challenges and limited the amount of experimenting and learning that occurred in the process. Furthermore, as discussed above, despite the lack of specificity contained in the G–7 communique, most countries generally intervened in similar ways using the same basic set of policy tools.[411]

While not all issues were resolved, since the G–7 agreement provided each nation with the discretion and flexibility to formulate how to safeguard its own banking system, many countries decided to provide broad support to their banking systems. As discussed above, the rescue plans in different countries, while they each have some unique features, contained similar elements: expanded deposit insurance, guarantees on non-deposit liabilities, purchases of impaired assets, and capital injections for financial institutions.

On October 14, 2008—less than two weeks after EESA was signed into law—then-Secretary Paulson formally announced that, alongside the Federal Reserve's establishment of a Commercial Paper Funding Facility (CPFF) and the FDIC's creation of the Temporary Liquidity Program (TLGP),[412] Treasury would "purchase equity stakes in a wide array of banks and thrifts."[413] Treasury concluded that while it is easy to make direct capital injections, setting up a structure to buy particular assets or groups of assets in the absence of liquid trading markets was more difficult.

Although Treasury officials have explained that the change in strategy with respect to capital injections rather than asset purchases was motivated both by the severity of the crisis and the need for prompt action,[414] as discussed above, its decision may

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[409] Donald L. Kohn, vice chairman, Board of Governors of the Federal Reserve System, Remarks at the Federal Reserve Bank of Boston 54th Economic Conference, Chatham, Massachusetts, *International Perspective on the Crisis and Response* (Oct. 23, 2009) (online at www.federalreserve.gov/newsevents/speech/kohn20091023a.htm) (hereinafter "Donald Kohn Remarks at the Federal Reserve Bank of Boston").

[410] World Leaders Offer Unity But No Steps to Ease Crisis, *supra* note 408 (including remarks from an interview with Mr. Nakagawa).

[411] For further discussion on the interventions taken by countries across the globe, *see* Sections C.1 and C.2, *supra.*

[412] The purpose of the CPFF was to enhance the liquidity of the commercial paper market by increasing the availability of term commercial paper funding to issuers and by providing greater assurance to both issuers and investors that firms will be able to roll over their maturing commercial paper. The TLGP was designed to unlock inter-bank credit markets and restore rationality to credit spread.

[413] U.S. Department of the Treasury, *Statement by Secretary Henry M. Paulson, Jr. on Actions to Protect the U.S. Economy* (Oct. 14, 2008) (online at www.treas.gov/press/releases/hp1205.htm).

[414] Henry M. Paulson, Jr., secretary of the Treasury (2006—2009), conversations with Panel staff (Aug. 5, 2010); U.S. Department of the Treasury, *Remarks by Secretary Henry M. Paulson, Jr. on Financial Rescue Package and Economic Update* (Nov. 12, 2008) (online at www.treas.gov/press/releases/hp1265.htm) (stating that the decision to purchase equity directly from financial institutions was "the fastest and most productive means of using our new authorities to stabilize our financial system.").

have also been influenced by similar actions taken across the globe, particularly the United Kingdom under the leadership of then-Prime Minister Gordon Brown. While such actions were not dispositive, it is possible that they might have played a role in the actions Treasury decided to take domestically.[415]

During an interview after announcing his government's financial rescue on October 8, 2008, Mr. Brown implied that the United Kingdom's plan was a faster and more efficient solution to the financial crisis than buying troubled real estate-related assets from financial institutions (as was initially proposed under the U.S. financial rescue plan). He remarked that "[t]his is not the American plan. The American plan is to buy up these bad assets by a state fund. Our plan is to buy shares in the banks themselves and therefore we will have a stake in the banks. We know that the taxpayers' interest had got to be protected at all times, and that is why we are ensuring that it is an investment stake in the banks. We are not just simply giving money." Mr. Brown also commented that the time for purchasing impaired assets had since come and gone, and he hoped that other countries would follow his lead. On the same day, Mr. Brown wrote to EU leaders to urge them to follow the United Kingdom as a model "where a concerted international approach could have a very powerful effect."[416] At a press briefing held after the United Kingdom's rescue announcement, then-Secretary Paulson signaled that Treasury was considering a rescue plan through which the government would provide capital injections to financial institutions in exchange for ownership stakes.[417] This marked the first occasion in which Treasury indi-

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For further discussion concerning the flexibility that EESA gives Treasury in terms of dealing with troubled assets (i.e., Treasury could either buy real estate-related troubled assets directly from the institutions that held them or instead put capital directly into those institutions by buying their preferred stock) and Treasury's ultimate decision to provide financial institutions with capital injections rather than asset purchases, *see* Congressional Oversight Panel, *August Oversight Report: The Continued Risk of Troubled Assets,* at 7–10 (Aug. 11, 2009) (online at cop.senate.gov/documents/cop-081109-report.pdf).

[415] Treasury conversations with Panel staff (July 22, 2010); Clay Lowery, assistant secretary of the Treasury for international affairs (Nov. 2005–Jan. 2009), conversation with Panel staff (July 23, 2010); Senate Committee on Finance, Testimony of Neil M. Barofsky, Special Inspector General for the Troubled Asset Relief Program, *Transcript: An Update on the TARP Program* (July 21, 2010) (publication forthcoming); Vincent Reinhart conversation with Panel staff (July 19, 2010) (supporting the proposition that the TARP so quickly transitioned into capital injections in part because of the similar actions taken by the United Kingdom).

During a conversation with Panel staff, then-Secretary Paulson stated that while he and President Bush had a conversation with then-Prime Minister Gordon Brown about capital injections, "the decision to make capital injections was a response to a rapidly changing situation, including a rapidly deteriorating market and the need for prompt and effective responsive action." In Mr. Paulson's view, the U.S. decision to inject capital into the banks was dictated by the need to prevent a meltdown of the U.S. financial system, and was not impacted by the U.K.'s capital program. Mr. Paulson also referenced how the design and implementation of the CPP in the United States wound up being very different from the capital injection programs done throughout Europe, including the United Kingdom. According to Mr. Paulson, "the U.K.'s capital program involved more government control than our program and had terms that were more punitive. Its effect was to nationalize two banks on the brink of failure, and no others participated." While only two banks participated in the United Kingdom's capital injection program, 707 financial institutions of all sizes participated in the CPP. Henry M. Paulson, Jr., secretary of the Treasury (2006–2009), conversation with Panel staff (Aug. 5, 2010).

[416] Britain Takes a Different Route to Rescue Its Banks, *supra* note 131; Robert Hutton and Rebecca Christie, *Brown Bank Rescue Takes U.K. Beyond Paulson Debt Plan,* Bloomberg (Oct. 9, 2008) (online at www.bloomberg.com/apps/news?pid=newsarchive&sid=aiNQKy3bayK0&refer=uk).

[417] U.S. Department of the Treasury, *Statement by Secretary Henry M. Paulson, Jr. on Financial Markets Update* (Oct. 8, 2008) (online at www.treas.gov/press/releases/hp1189.htm) (stating that "the EESA adds broad, flexible authorities for Treasury to buy or insure troubled assets, provide guarantees, and inject capital.").

cated publicly that it was contemplating capital injections instead of asset purchases.

Furthermore, the influence of the actions of foreign countries (such as the U.K. bank debt guarantees) upon the U.S. response was displayed in FDIC Chairman Sheila Bair's remarks at the joint Treasury, Federal Reserve, and FDIC press conference on October 14, 2008. Chairman Bair noted that "[o]ur efforts also parallel those by European and Asian nations. Their guarantees for bank debt and increases in deposit insurance would put U.S. banks on an uneven playing field unless we acted as we are today."[418] As U.S. officials worked to implement the FDIC's Temporary Liquidity Guarantee Program (TLGP), they consulted closely with foreign financial authorities to ensure that actions taken in the United States would not cause problems for other countries, while also safeguarding the interests of U.S. institutions.[419]

Further evidence of the close coordination or emulation between U.S. and U.K. policymaking is displayed in the United Kingdom's particular interest in the Asset Guarantee Program (AGP), created pursuant to Section 102 of EESA and through which the Federal Reserve, Treasury, and the FDIC placed guarantees, or assurances, against distressed or illiquid assets held by Citigroup and Bank of America.[420] In the days and weeks immediately after the announcement of the AGP, U.S. and U.K. officials held periodic discussions about the structure of this program and the challenges the Federal Reserve, Treasury, and the FDIC were facing with respect to implementation.[421] Ultimately, as discussed above, the United Kingdom established its own asset protection scheme.

On February 10, 2009, the Obama Administration announced its Financial Stability Plan—a broad framework for financial recovery and stability that included a combination of stress tests for the nation's largest BHCs (formally known as the Supervisory Capital Assistance Program, or SCAP), a public-private investment program to help remove impaired assets from the balance sheets of financial institutions, a comprehensive foreclosure mitigation plan, and initiatives designed to spearhead consumer and business lending.[422] Between February and May 2009, the Federal Reserve, the Office of the Comptroller of the Currency (OCC), and the FDIC worked collaboratively to conduct stress tests of the 19 largest BHCs in the United States and to identify the potential losses across select categories of loans, resources available to absorb those losses, and any shortfalls in capital buffers.[423]

Certain U.S. responses to the crisis, and especially the stress tests, have informed foreign responses. In 2009, as discussed above, the European Union conducted an aggregated stress test of its 22 biggest cross-border lenders. This round of tests was superficially

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[418] Federal Deposit Insurance Corporation, *Statement by Federal Deposit Insurance Corporation Chairman Sheila Bair: U.S. Treasury, Federal Reserve, FDIC Joint Press Conference* (Oct. 14, 2008) (online at www.fdic.gov/news/news/press/2008/pr08100a.html).

[419] Treasury conversations with Panel staff (July 22, 2010); Clay Lowery, assistant secretary of the Treasury for international affairs (Nov. 2005–Jan. 2009), conversation with Panel staff (July 23, 2010).

[420] For further discussion of the AGP, see Section E.1.b, *supra*.

[421] Treasury conversation with Panel staff (July 22, 2010).

[422] U.S. Department of the Treasury, *Fact Sheet: Financial Stability Plan* (Feb. 10, 2009) (online at www.financialstability.gov/docs/fact-sheet.pdf).

[423] For further discussion and analysis of the stress tests, *see* June Oversight Report, *supra* note 143.

similar to the U.S. stress tests. Like the U.S. tests, the EU stress tests were guided by two scenarios: a baseline scenario and an adverse scenario. However, the EU tests differed from the U.S. tests in several important ways. Unlike the U.S. stress tests, which assessed the condition of individual institutions, the outcomes of the EU tests were aggregated to show the health of the overall EU banking sector (i.e., bank-by-bank results were not released), and the exercise was not used to determine which banks needed to be recapitalized. In addition, whereas the U.S. stress tests were centrally coordinated, the EU tests were applied by the relevant national supervisory authority, meaning that the stress test application could have conceivably varied on a country-by-country basis.

Recently, the European Union decided to conduct another round of stress tests on 91 banks. While there still are some differences in approach between the United States and the European Union, this latest round appears to resemble more closely the U.S. stress tests in both form and substance. In contrast to its 2009 predecessor and the U.S. tests, which did not assess smaller banks, the scope of the 2010 Committee of European Banking Supervisors (CEBS) tests went beyond the EU's largest banking organizations. Like the U.S. stress tests, this latest round was guided by both baseline and adverse scenarios to determine whether banks are sufficiently capitalized to deal with severe economic shocks, and at least some European governments appear inclined to recapitalize their banks if necessary.[424] Relative to the 2009 test, the 2010 CEBS test was much more transparent. Most importantly, the 2010 CEBS test released bank-by-bank results rather than results in the EU aggregate. Additionally, the process for how the stress tests were applied was disclosed. However, it is unclear whether transparency was increased because: (1) the U.S. test was widely regarded as more successful than the 2009 CEBS test; (2) the EU's sovereign debt crisis prompted a crisis of confidence among banks' investors that could be cleared up only by increasing transparency; or (3) some combination of these two factors. As the Panel has noted previously, the U.S. stress tests helped to restore confidence in the nation's largest banking organizations by looking ahead and providing clear statements of the prospective condition of each of

[424] *Transcript: Merkel Q&A,* Wall Street Journal (June 24, 2010) (online at online.wsj.com/article/NA_WSJ_PUB:SB10001424052748704629804575324913545117850.html) (stating that "building trust will only work if every country also shows how it will handle the results, for example by recapitalizing its banks if necessary").

According to the results announced on July 23, 2010, seven out of 91 European banks failed the stress tests. At this point, however, there remains no clear path for recapitalization for banks found to be capital-deficient. While Greece, Spain, and Germany have bank bailout funds that firms might be able to access if they cannot raise funds privately, the CEBS continues to emphasize that "it is the responsibility of the national supervisory authority to require and take supervisory actions toward a bank." Committee of European Banking Supervisors, *CEBS's Press Release on the Results of the 2010 EU-Wide Stress Testing Exercise* (July 23, 2010) (online at stress-test.c-ebs.org/documents/CEBSPressRelease.pdf) (hereinafter "CEBS Press Release on the Results of the EU-Wide Stress Tests"). The idea of recapitalizing banks, if necessary, is very similar to, and an emulation of, Treasury's commitment to recapitalize any of the 19 stress tested bank holding companies that needed additional capital. U.S. Department of the Treasury, *Secretary Geithner Introduces Financial Stability Plan* (Feb. 10, 2009) (online at www.treas.gov/press/releases/tg18.htm) (stating that "[t]hose institutions that need additional capital will be able to access a new funding mechanism that uses funds from the Treasury as a bridge to private capital.").

the BHCs tested.[425] It appears that the European regulators have learned this lesson, as one of their primary objectives was to reassure investors that banks are sufficiently capitalized.[426] While a bank's national origin is significant for purposes of the stress tests (within the United States, Treasury committed to recapitalize any of the 19 stress-tested BHCs, if necessary), the stress test results have international implications because investors are more prone to invest in an institution that has been found to be adequately capitalized.

The China Banking Regulatory Commission has also conducted stress tests on its banks over the past year (assuming residential real estate price declines of as much as 60 percent in the hardest hit markets). It is difficult, though, to determine the extent to which, if any, this response was informed by the U.S. stress tests because the Chinese economy, as discussed above, has generally avoided the banking crises that impacted the United States and much of Europe (as demonstrated by the record issuance of $1.4 trillion in new loans by Chinese banks in 2009).[427]

According to Assistant Secretary for Financial Stability Herbert M. Allison, Jr., the Administration continues to work through multilateral institutions and through direct bilateral engagement to foster financial regulatory reform and improve the stability of the global economy.[428] The G–7/G–8 members' finance ministers and central bank governors continued to meet and coordinate actions into 2009, emphasizing a commitment to reestablish full confidence in the global financial system. From November 2008 through April 2009, the G–20 Leaders process became increasingly relevant (as noted by the increasing frequency of meetings and communiqués) as it focused intensively on rescue efforts.[429] Mr. Allison stated further that the G–20 Leaders process is the "key channel for international cooperation to strengthen the framework for supervising and regulating the financial markets."[430]

2. Role of Central Banks at the Height of the Crisis

As Federal Reserve Vice Chairman Donald L. Kohn stated, "[t]he financial and economic crisis that started in 2007 tested central banks as they had not been tested for many decades," and the Federal Reserve and other central banks have had to make innovative

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[425] June Oversight Report, *supra* note 143, at 27–29. The Panel cautions, however, that the stress tests should neither be dismissed nor assigned greater value than they merit.

[426] *See* CEBS Press Release on the Results of the EU-Wide Stress Tests, *supra* note 424 (stating that the "overall objective of the 2010 exercise is to provide policy information for assessing the resilience of the EU banking system to possible adverse economic developments and to assess the ability of banks in the exercise to absorb possible shocks on credit and market risks, including sovereign risks"); Committee of European Banking Supervisors, *CEBS's Statement on Key Features of the Extended EU-Wide Stress Test* (July 7, 2010) (online at www.c-ebs.org/CMSPages/GetFile.aspx?nodeguid=357173cf-0b06-4831-abcd-4ea90c64a960) (stating that "[t]he objective of the extended stress test exercise is to assess the overall resilience of the EU banking sector and the banks' ability to absorb further possible shocks on credit and market risks, including sovereign risks . . . ").

[427] For further discussion of the impact of the global financial crisis on major economies outside the United States and Europe, including China, *see* Section C.1.b, *supra*.

[428] Congressional Oversight Panel, *Questions for the Record from Assistant Secretary Herbert M. Allison, Jr.,* at 11 (Mar. 4, 2010) (online at cop.senate.gov/documents/testimony-030410-allison-qfr.pdf) (hereinafter "Questions for the Record from Assistant Secretary Herbert M. Allison, Jr.").

[429] For further discussion of the increasing relevance and role of the G–20 during the financial crisis, *see* Section C.3, *supra*.

[430] Questions for the Record from Assistant Secretary Herbert M. Allison, Jr., *supra* note 428, at 11.

(and sometimes unprecedented) changes to traditional policy tools as the crisis played out.[431] At the height of the financial crisis, the central banks worked together closely in focusing their efforts largely on addressing liquidity pressures and resolving disruptions in funding markets.

a. Focus on Liquidity Pressures

Starting in late 2007, central banks generally responded to funding problems with significant expansions of their liquidity facilities. Such actions typically included lengthening lending maturities, pumping large amounts of funds into overnight markets, broadening acceptable collateral, and sometimes initiating new auction techniques. Starting in September 2007, the Federal Reserve conducted several large operations in the federal funds market (such as reducing the spread of the discount rate over the target federal funds rate), and the Bank of Canada, the Bank of Japan, the ECB, and other central banks conducted special operations to inject overnight liquidity at the same time. In addition, on October 8, 2008, the Federal Reserve announced a reduction in its policy interest rate jointly with five other major central banks—the Bank of Canada, the Bank of England, the ECB, the Swedish National Bank, and the Swiss National Bank—with the Bank of Japan expressing support. The Federal Reserve also created a number of emergency liquidity facilities at the height of the crisis to meet the funding needs of key non-bank market participants, including primary securities dealers, money market mutual funds, and other users of short-term funding markets, such as purchasers of securitized loans.[432]

b. Reciprocal Currency Arrangements ("Swap Lines")

i. Background

The credit and liquidity constraints seen at the height of the financial crisis disrupted U.S. dollar funding markets not only domestically but also overseas. While some foreign financial institutions have relied on dollars acquired through their U.S. affiliates, "many others relied on interbank and other wholesale markets to obtain dollars."[433] Normally, these borrowers can obtain dollar funding at the same interest rates as U.S. banks, depending upon

[431] Donald L. Kohn, vice chairman, Board of Governors of the Federal Reserve System, Speech at the Carleton University, Ottawa, Canada, *The Federal Reserve's Policy Actions During the Financial Crisis and Lessons for the Future* (May 13, 2010) (online at www.federalreserve.gov/newsevents/speech/kohn20100513a.htm).

[432] For example, in December 2007, several central banks jointly announced measures to address elevated pressures in short-term funding markets. The Federal Reserve created the Term Auction Facility (TAF) to auction term funds to depository institutions against the wide variety of collateral that can be used to secure loans at the discount window, the Bank of Canada entered into term purchase and resale agreements, and the Bank of England expanded the total amount of reserves offered and expanded the range of collateral accepted for short-term funding in its repo open market operations. In March 2008, the Federal Reserve established the Term Securities Lending Facility (TSLF), which allowed primary dealers to swap a range of less liquid assets for Treasury securities in the Federal Reserve's portfolio for terms of about one month, and the Bank of England introduced a similar type of facility (a plan to swap securities backed by mortgages for government bonds for a period of up to three years) in April 2008.

[433] Ben S. Bernanke, chairman, Board of Governors of the Federal Reserve System, Remarks at the Fifth European Central Banking Conference, Frankfurt, Germany, *Policy Coordination Among Central Banks* (Nov. 14, 2008) (online at www.federalreserve.gov/newsevents/speech/bernanke20081214a.htm).

their level of credit risk.[434] Beginning in August 2007, however, the interbank lending market experienced significant disruptions. As stated by Michael J. Fleming, a vice president in the Capital Markets Function of FRBNY's Research and Statistics Group, and Nicholas Klagge, an economic analyst in the Risk Analytics Function of FRBNY's Credit and Payment Risk Group, "[c]oncerns about credit risk and higher demand for liquidity placed extraordinary strains on the global market for interbank funding in U.S. dollars," as "[i]nterbank interest rates denominated in dollars increased sharply, and market participants reported little or no interbank lending at maturities longer than overnight."[435] The increased spread between the London Interbank Rate (LIBOR) and the overnight indexed swap (OIS)—a measure of illiquidity in financial markets that is used as a proxy for fears of bank bankruptcy—signaled that interbank lending at longer maturities was perceived to be especially risky.[436] These market conditions signaled a sharp reduction in the general availability of credit, which was driven largely by fears over credit risk and lender uncertainty about their own liquidity needs.

ii. Summary of Swap Line Programs

In response to these market disruptions, the Federal Reserve and other central banks established reciprocal currency arrangements, or swap lines, starting in late 2007.[437] A swap line functions as follows: as the borrowing central bank draws down on its swap line, it sells a specified quantity of its currency to the lending central bank in exchange for the lending central bank's currency at the prevailing market exchange rate. The two central banks simultaneously enter into an agreement that obligates the borrowing central bank to buy back its currency at a future date at the same exchange rate that prevailed at the time of the initial draw, along with interest.[438] Fluctuations in exchange rates or interest rates,

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[434] Michael J. Fleming and Nicholas J. Klagge, *The Federal Reserve's Foreign Exchange Swap Lines,* Current Issues in Economics and Finance, Vol. 16, No. 4, at 2 (Apr. 2010) (online at www.newyorkfed.org/research/current_issues/ci16-4.pdf) (hereinafter "The Federal Reserve's Foreign Exchange Swap Lines").

[435] *Id.* at 1.

[436] *Id.* at 2.

[437] Between December 2007 and April 2009, the Federal Reserve established swap lines with the following foreign central banks: European Central Bank (ECB), Swiss National Bank (SNB), Bank of Japan, Bank of England, Bank of Canada, Reserve Bank of Australia, Sveriges Riksbank (Sweden), Danmarks Nationalbank (Denmark), Norges Bank (Norway), Reserve Bank of New Zealand, Banco Central do Brasil, Banco de Mexico, Bank of Korea, and Monetary Authority of Singapore. The ECB also established swap lines with the central banks of Denmark and Hungary to provide euro liquidity in those countries. For further details concerning the swap lines, *see* Annex I, *infra.*

On April 6, 2009, the Federal Reserve, the Bank of England, the European Central Bank, the Bank of Japan and the Swiss National Bank announced swap arrangements that would enable the provision of foreign currency liquidity by the Federal Reserve to U.S. financial institutions. If drawn upon, these arrangements were designed to provide liquidity in sterling in amounts of up to £30 billion ($44.5 billion), in euro in amounts of up to €80 billion ($107.9 billion), in yen in amounts of up to ¥10 trillion ($100 billion), and in Swiss francs in amounts of up to CHF 40 billion ($35 billion). While these foreign currency liquidity swap lines were initially authorized through October 30, 2009 and were later extended through February 1, 2010, the Federal Reserve did not make any draw downs on these swap lines.

[438] *See* The Federal Reserve's Foreign Exchange Swap Lines, *supra* note 434, at 2.

According to Federal Reserve Governor Daniel K. Tarullo, "the existence of these facilities can reassure market participants that funds will be available in case of need, and thus help forestall hoarding of liquidity, a feature that exacerbated stresses during the global financial crisis." House Financial Services, Subcommittee on International Monetary Policy and Trade and Subcommittee on Domestic Monetary Policy and Technology, Written Testimony of Daniel K. Tarullo, member, Board of Governors of the Federal Reserve System, *The Role of the Inter-*

therefore, have no effect on the payments made at the end of the transaction, meaning that the Federal Reserve bears no market pricing risk as a result of its swap lines. The borrowing central bank will then lend the dollars at variable or fixed rates to entities in its country.

In the immediate aftermath of the Lehman Brothers bankruptcy in September 2008, the Federal Reserve rapidly expanded the size and scope of its swap line program, increasing the total amount of dollars made available to central banks under the program from $67 billion to $620 billion. In December 2008—the peak of the Federal Reserve's swap program—swaps outstanding totaled more than $580 billion, accounting for over 25 percent of the Federal Reserve's total assets.[439] During 2009, however, foreign demand for dollar liquidity through swap lines decreased, primarily for two reasons: (1) funding market conditions improved; and (2) banks were able to secure funds elsewhere at lower costs. (Since the loans provided by the borrowing central banks to financial institutions in their jurisdictions are offered at rates that would be above market rates in normal times, demand typically decreases when market conditions improve, and market alternatives become more attractive.)

The swap line programs established by the Federal Reserve, which ended on February 1, 2010,[440] enhanced the ability of foreign central banks to provide U.S. dollar funding to financial institutions in their jurisdictions at a time when interbank lending was effectively frozen.[441] According to Messrs. Fleming and Klagge, the swaps "potentially improve[d] conditions in the global funding and credit markets more generally."[442] Overall, they conclude that "the evolution of funding pressures during the crisis suggests that swap line program announcements and operations were effective at easing strains in dollar funding markets."[443] All of the swaps established from December 2007 to February 2010 were repaid in full, and the Federal Reserve earned $5.8 billion in interest.

3. Assessment of Degree of Cooperation vs. Competition/Conflict

There are numerous examples of effective coordination efforts, which are documented in more detail above: unified interest rate cuts, currency swaps, and the use of the G–20 are evidence of suc-

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national Monetary Fund and Federal Reserve in Stabilizing Europe, at 7–8 (May 20, 2010) (online at www.house.gov/apps/list/hearing/financialsvcs_dem/tarullo_testimony_5.20.10.pdf).

[439] The Federal Reserve's Foreign Exchange Swap Lines, *supra* note 434, at 5.

[440] The Panel notes that in response to the European sovereign debt crisis, the Federal Reserve reestablished its swap line facilities by entering into agreements with the ECB and other major central banks (the Bank of England, the Swiss National Bank, the Bank of Canada, and the Bank of Japan) in order to counteract a shortage of dollar liquidity. The Federal Reserve also agreed to disclose information regarding the use of the swap lines (along with the total amount of swaps outstanding by individual central bank) by each of the counterparty central banks on a weekly basis. These swaps were authorized through January 2011. Board of Governors of the Federal Reserve System, *Federal Reserve Releases Agreements with Foreign Central Banks to Reestablish Temporary Dollar Swap Facilities* (May 11, 2010) (online at www.federalreserve.gov/newsevents/press/monetary/20100511a.htm).

[441] For further discussion of how the events of late 2008 fostered an environment of uncertainty that made the cost of borrowing impractical for financial institutions, *see* Section C.1.a, *supra.*

[442] The Federal Reserve's Foreign Exchange Swap Lines, *supra* note 434, at 1.

[443] The Federal Reserve's Foreign Exchange Swap Lines, *supra* note 434, at 6.

cessful coordination.[444] There are also numerous examples of insufficient coordination.[445] For instance, neither central banks nor ministries of finance maintained a global database of information, and as a result, policymakers occasionally found themselves without key data as the crisis unfolded.[446] This lack of centralized publicly available data on governmental financial rescue efforts continues to this day, as there is no consistent and reliable single source for this information. In addition, the wide range of transparency levels amongst governments makes comparison between countries difficult. The Panel understands that the IMF has collected this data from various governmental authorities,[447] but that this data was provided on a confidential basis. This is the type of information that should be publicly available for use in policymaker analysis. Similarly, the fact that stress tests were neither global nor uniform suggests that there is room for substantial improvement.

A comprehensive and definitive evaluation of the degree of coordination that occurred during the financial crisis will be possible only with the benefit of historical perspective. Only time will tell whether the degree of coordination was appropriate and whether

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[444] *See* Sections C.3 and E.2, *supra.* Lael Brainard, undersecretary for international affairs, U.S. Department of the Treasury, Remarks As Prepared for Delivery at the Peterson Institute for International Economics (July 26, 2010) (online at treasury.gov/press/releases/tg789.htm) ("[I]n response to the most globally synchronized recession the world has seen, we have mounted the most globally coordinated response the world has attempted."); Paulson October 2008 Statement, *supra* note 407 ("Governments around the world have taken actions to address financial market developments, and international cooperation and coordination has [sic] been robust."); U.S. Department of the Treasury, *Under Secretary for International Affairs David H. McCormick Remarks to the Better Hong Kong Foundation* (Oct. 22, 2008) (online at www.ustreas.gov/press/releases/hp1230.htm) (hereinafter "David H. McCormick Remarks to the Better Hong Kong Foundation") ("Over the past two weeks, we have witnessed an unprecedented international response to this financial turmoil. The Group of Seven industrialized countries have announced and are implementing a coordinated action plan to stabilize financial markets and restore the flow of credit . . . [C]entral banks from around the world have acted together in recent months to provide additional liquidity for financial institutions."); David H. McCormick, under secretary for international affairs, U.S. Department of the Treasury, Remarks before the Barclays Asia Forum, *Our Economy, A Global Challenge* (Nov. 12, 2008) (online at www.ustreas.gov/press/releases/hp1276.htm) (hereinafter "David H. McCormick Remarks before the Barclays Asia Forum") ("We should take confidence from the fact that countries around the world have responded with comprehensive actions to help stem the crisis. The Group of Seven (G–7) industrialized countries announced and are implementing a coordinated action plan to stabilize financial markets, restore the flow of credit, and support global economic growth. Others throughout Europe, Asia, and Latin America have adopted similar approaches."); Adam Posen, senior fellow at the Peterson Institute for International Economics and member of the Monetary Policy Committee of the Bank of England, conversation with Panel staff (July 27, 2010) (discussing the quality of international coordination efforts during the crisis); C. Fred Bergsten, director, Peterson Institute of International Economics, conversations with Panel staff (July 29, 2010) (referring to the quality of coordination as one of the defining elements of the crisis); International Monetary Fund, *United States: Financial System Stability Assessment,* at 43 (July 2010) (online at www.imf.org/external/pubs/ft/scr/2010/cr10247.pdf) (hereinafter "IMF Financial System Stability Assessment") ("U.S. agencies appear to have managed to achieve a high level of coordination with counterparts abroad during the recent crisis, building on longstanding relationships").

[445] *See* Donald Kohn Remarks at the Federal Reserve Bank of Boston, *supra* note 409 ("[T]he process was not well coordinated, with action by one country sometimes forcing responses by others."). Other examples include the U.K. dispute with Iceland regarding deposits in Landsbanki; U.K. and EU fears regarding Ireland's blanket bank liability guarantee; variances in timing and substance of short-selling and deposit insurance rules; and the cumbersome bailouts of Fortis and Dexia by the failing banks' multiple home country regulators. The IMF described the Fortis bailout as illustrative of "the tendency for national interests to come to the fore in a crisis and the difficulty in such circumstances of achieving a cross-border consensus, even between jurisdictions whose financial regulators have a long tradition of co-operation and whose legal frameworks are considerably harmonized." IMF Proposed Framework for Enhanced Coordination, *supra* note 33, at 13.

[446] *See generally* Financial Stability Board and International Monetary Fund, *The Financial Crisis and Information Gaps* (Oct. 29, 2009) (online www.imf.org/external/np/g20/pdf/102909.pdf). *See also* Clay Lowery, assistant secretary of international affairs (2005–2009), conversations with Panel staff (July 23, 2010).

[447] *See* International Monetary Fund, *A Fair and Substantial Contribution by the Financial Sector,* at 35–36 (June 2010) (online at www.imf.org/external/np/g20/pdf/062710b.pdf).

countries focused too much on their own narrow national interests at the expense of the global economy. Yet even if reaching a definitive conclusion is not possible, the nature of coordination during the financial crisis raises several key issues.

a. Complete Coordination may not Always be Desirable

Ideally, international rescue efforts would include a mixture of uniform collective action and individuated, country-specific action tailored to address the specific needs of specific countries. As detailed above and in prior Panel reports, the financial crisis is littered with numerous examples of coordinated and isolated approaches. Acting in concert, several central banks took the unprecedented step of announcing a coordinated reduction in interest rates in the fall of 2008. Acting alone, the U.S. government designed stress tests specific to U.S. institutions and to the U.S. economy, intending to restore confidence in its largest financial institutions.

b. The Importance of Coordinating Before a Crisis

The financial crisis demonstrated that no matter how globally integrated the economy may be, borders still matter: ultimately each individual nation is called upon to bear the costs of assisting and restoring its own economy and suffers the consequences if it does not.[448] In part because they will bear these costs, countries tend to act in their own self-interest. Sometimes the self-interest of one country aligns with the interests of the international community, as it did during many phases of the financial crisis. When central banks agreed to coordinate a cut in interest rates, for example, the interests of individual nations were in alignment with the broader needs of the economic system. In other situations, however, it is less clear that these interests are in alignment. These misalignments of interests may produce weaknesses in international supervision (pre-crisis) or may weaken the scope and scale of reform efforts (post-crisis).[449] It is also uncertain whether these interests would align in a future crisis.[450] For example, Brookings Institution fellow Douglas J. Elliott maintains that as institutions become more and more internationally integrated and have less of a foot-

[448] *See* Donald Kohn Remarks at the Federal Reserve Bank of Boston, *supra* note 409 ("[R]egulations must be passed and implemented nationally. On one level, this type of action is simply what is required under existing legal structures. On another level, it reflects the reality that taxpayers in individual countries end up bearing much of the cost when home-country institutions need to be stabilized."); Domenico Lombardi, president of The Oxford Institute for Economic Policy and Nonresident Senior Fellow at the Brookings Institution, conversations with Panel staff (Aug. 2, 2010) (stating that in spite of the increasing globalization of finance, the policy framework remains local). *See also* John Lipsky, first deputy managing director, International Monetary Fund, Remarks at the ECB and its Watchers Conference XII, *Towards an International Framework for Cross Border Resolution* (July 9, 2010) (online at www.imf.org/external/np/speeches/2010/070910.htm) (hereinafter "John Lipsky Remarks at the ECB and its Watchers Conference XII") ("As has been noted widely, major financial firms today live globally but die locally."). Other analysts have discussed the importance of home countries in terms of market perceptions of rescue capacity. Countries perceived as unable to provide sufficient rescue assistance to their institutions may find that perception reflected in the capital markets. RGE Monitor staff conversations with Panel staff (July 28, 2010).

[449] Simon Johnson, professor at MIT and former chief economist of the International Monetary Fund, conversations with Panel staff (July 30, 2010).

[450] *See* IMF Proposed Framework for Enhanced Coordination, *supra* note 33, at 13 (discussing "the tendency for national interests to come to the fore in a crisis and the difficulty in such circumstances of achieving a cross-border consensus, even between jurisdictions whose financial regulators have a long tradition of co-operation and whose legal frameworks are considerably harmonized").

print in one specific country, home country governments may be more reluctant to accept the full bill for rescuing the company.[451]

Making an effort to coordinate in advance of a crisis could help to minimize the likelihood and effect of misaligned national interests at moments when alignment is most critical.[452] The IMF has advocated this approach, asserting that it is "essential" to initiate "[e]x ante information gathering, preparation, and 'war gaming.'"[453] Ex ante coordination permits countries to establish rules, expectations, and purposes during the periods when it is easiest to do so—as one economist noted, coordinating during a crisis is a "scramble."[454] Advance coordination allows countries to consider a complex interplay of factors—domestic needs, concerns about maintaining competitiveness, and arbitrage opportunities—at a time when sustained, thoughtful consideration is possible. It also helps government officials to develop relationships with each other that may prove useful when they are forced to interact during a crisis.[455] Finally, ex ante coordination may enable governments to develop processes for working across a diverse array of national regulatory regimes.[456]

There are a number of ex ante mechanisms that could help to facilitate coordination during a crisis. A cross-border resolution regime could establish rules that would permit the orderly resolution of large international institutions, while also encouraging contingency planning and the development of resolution and recovery plans.[457] Such a regime could help to avoid the chaos that followed the Lehman bankruptcy, in which foreign claimants struggled to

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[451] Douglas J. Elliott, fellow, Brookings Institution, conversations with Panel staff (July 30, 2010). *See also* John Lipsky Remarks at the ECB and its Watchers Conference XII, *supra* note 448 ("Indeed, recent experience demonstrates that the more interconnected and integrated international financial institutions and groups have become, the more disruptive and value-destroying uncoordinated local resolution actions are likely to be.").

[452] Of course, some countries may perceive that there are risks in placing too much emphasis on ex ante coordination. Taking steps in advance of a crisis requires officials to make certain assumptions about the form the next crisis will take. If those assumptions turn out to be false, then countries may find themselves locked into certain regimes that limit their flexibility in responding to challenges they face. For this reason, when dealing with certain issues, some countries may believe that it is preferable to defer certain types of coordinating efforts until a crisis actually arises. Simon Johnson, professor at MIT and former chief economist of the International Monetary Fund, conversations with Panel staff (July 30, 2010).

[453] IMF Financial System Stability Assessment, *supra* note 444, at 40. Former Secretary Paulson stated that the United States conducted "war games" with the U.K. prior to the crisis. In this context, the term "war games" refers to efforts to plan for potential economic emergencies, rather than military exercises. Henry M. Paulson, secretary of the Treasury (2006–2009), conversations with Panel staff (Aug. 5, 2010). It does not appear that similar exercises were conducted at an international scale.

[454] Simon Johnson, professor at MIT and former chief economist of the International Monetary Fund, conversations with Panel staff; Toward an Effective Resolution Regime for Large Financial Institutions, *supra* note 352 ("[T]he high legal and political hurdles to harmonized cross-border resolution processes suggest that, for the foreseeable future, the effectiveness of those processes will largely depend on supervisory requirements and cooperation undertaken before distress appears on the horizon.").

[455] *See* John Lipsky Remarks at the ECB and its Watchers Conference XII, *supra* note 448 ("[W]hen faced with the potential failure of a large international financial institution, national authorities will be willing to cooperate fully only if they trust each other.").

[456] *See* David H. McCormick Remarks before the Barclays Asia Forum, *supra* note 444 ("We can also foster international cooperation by making it easier and more efficient for countries to interact across national regulatory regimes.").

[457] While the recently enacted Dodd-Frank legislation provides for resolution authority within the United States, it makes no provision for cross-border resolution authority. The IMF has advocated for the creation of an international resolution framework. John Lipsky Remarks at the ECB and its Watchers Conference XII, *supra* note 448. *See also* IMF Financial System Stability Assessment, *supra* note 444, at 50 ("[C]ross-border issues in the event of the future failure of a systemic international group would remain a challenge.").

secure priority in the bankruptcy process,[458] and that preceded the AIG rescue, in which the uncertain effect of bankruptcy on international contracts pressured the U.S. government to support the company.[459] Additionally, the development of international regulatory regimes could help to discourage regulatory arbitrage and pressure individual countries to compete in a "race to the top" by adopting more effective regimes at the national level.[460] Senator Christopher Dodd (D–CT) has argued that routine meetings between senior regulators of G–20 countries—including meetings of a "Principals Group" prior to G–20 summits—would help to ensure that regulations are consistent across borders.[461]

Finally, ex ante coordination could help to establish robust institutions that could provide a framework for resolving issues during the crisis itself. Regular meetings of the G–20 and FSB, for example, establish a setting and mode of communication that could become a convenient default during a crisis.[462] Facilitating the growth of such institutions also helps government officials to develop working relationships with each other that would promote efficiency in crisis response efforts. For instance, involving international institutions at G–20 meetings places the institution side by side with heads of state and finance ministers.[463] Strengthening such institutions has a more subtle normative effect as well: it adds legitimacy to the notion that economic policy is an international endeavor in addition to a national one.

There are also less formal coordinating mechanisms that could be developed prior to a crisis. For instance, an international information database could provide details on international markets and on multinational companies' cross-border exposures that could assist both national governments and international bodies in coordinating rescue efforts during a crisis. According to the IMF, some

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[458] John Lipsky Remarks at the ECB and its Watchers Conference XII, *supra* note 448; IMF Financial System Stability Assessment, *supra* note 444, at 44; C. Fred Bergsten, director, Peterson Institute of International Economics, conversations with Panel staff (July 29, 2010).

[459] *See generally* June Oversight Report, *supra* note 10.

[460] To address the problem of regulatory arbitrage, the January 2009 Special Report recommended that the State Department and U.S. financial regulators work together with other countries to assure that a regulatory floor be created. The report also recommends the United States participate in international organizations that promote coordination between national regulators. The Basel Committee on Bank Supervision, the Senior Supervisors Group, and the International Organization of Securities Commissions are mentioned specifically. Congressional Oversight Panel, *Special Report on Regulatory Reform,* at 45–46 (Jan. 2009) (online at cop.senate.gov/documents/cop-012909-report-regulatoryreform.pdf). *See also* IMF Financial System Stability Assessment, *supra* note 444, at 5, 43 ("Every effort should be taken to coordinate these efforts internationally, to ensure they encourage a 'race to the top' rather than inconsistent approaches that could widen the scope for regulatory arbitrage . . . The growth in transactions booked in offshore tax havens illustrates the channels that have opened for regulatory and tax arbitrage and underscore the importance of U.S. participation in international efforts toward coordinated and consistent supervisory and regulatory policies.").

[461] Atlantic Council, *Dodd: G20 Has Taken Over* (Aug. 4, 2010) (online at www.acus.org/new_atlanticist/dodd-g20-has-taken-over).

[462] *See* David H. McCormick Remarks to the Better Hong Kong Foundation, *supra* note 444 ("[T]he recent crisis has highlighted the importance of continued cooperation among major economies through such forays as the G–20, the Financial Stability Forum, and the International Monetary Fund.").

[463] Domenico Lombardi, president of the Oxford Institute for Economic Policy and nonresident senior fellow at the Brookings Institution, conversations with Panel staff (Aug. 2, 2010); Douglas J. Elliott, fellow, Brookings Institution, conversations with Panel staff (July 30, 2010).

countries have already begun taking steps to make such information accessible.[464]

c. The Role of the TARP in Multilateral Negotiations

According to Administration officials who were working closely with their foreign counterparts during the fall and early winter of 2008, the existence of the TARP enhanced the ability of the United States to convince other countries to enact measures to combat the financial crisis.[465] When the United States hosted the G–20 summit in Washington, DC in November 2008, the TARP had been in effect for more than a month, and several U.S. financial institutions had already received TARP funds. By the time of the next summit, in London in April 2009, hundreds of institutions had received TARP funds.[466] The existence of the TARP evidenced the willingness of the United States to address its own economic challenges and signaled to the international community that the country recognized the seriousness of the financial crisis. The TARP also thrust the United States into a position of "demonstrable leadership,"[467] according to one former Treasury official, and provided credibility at a time when the United States was trying to convince other countries to join it in developing a robust crisis response.[468] Without the TARP, the United States would have had little credibility in these negotiations.[469]

At the same time, Vincent Reinhart, a resident scholar at the American Enterprise Institute, maintains that the TARP eventually became perceived as a liability for the U.S. government in its interactions with foreign governments. Whereas initially it had been viewed as a bold, early step to address the financial crisis, as time progressed it was viewed less as a systematic response and more as a reflection of a disjointed, ad hoc effort. This perception of the program decreased its usefulness in enhancing U.S. credibility.[470] In addition, the government's ability to use the existence of the TARP to bolster its negotiating position was blunted by the perception that the United States was responsible for causing the financial crisis.[471]

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[464] *See* IMF Financial System Stability Assessment, *supra* note 444, at 43 ("The United States has embraced efforts to improve information sharing and cooperation in the supervision of internationally active financial firms.").

[465] Clay Lowery, assistant secretary of international affairs (2005–2009), conversation with Panel staff (July 23, 2010); Vincent Reinhart, resident scholar, American Enterprise Institute, conversation with Panel staff (July 19, 2010).

[466] *See* Treasury Transactions Report, *supra* note 64.

[467] Clay Lowery, assistant secretary of international affairs (2005–2009), conversation with Panel staff (July 23, 2010); David H. McCormick Remarks to the Better Hong Kong Foundation, *supra* note 444 ("These actions demonstrate to market participants around the world that the United States is committed to taking all necessary steps to unlock our credit markets, minimize the impact of the current instability on the U.S. economy, and restore the health of the global financial system.").

[468] Domenico Lombardi, president of the Oxford Institute for Economic Policy and nonresident senior fellow at the Brookings Institution, conversations with Panel staff (Aug. 2, 2010).

[469] C. Fred Bergsten, director, Peterson Institute of International Economics, conversations with Panel staff (July 29, 2010).

[470] Vincent Reinhart, resident scholar, American Enterprise Institute, conversation with Panel staff (July 19, 2010).

[471] Adam Posen, senior fellow at the Peterson Institute for International Economics and member of the Monetary Policy Committee of the Bank of England, conversation with Panel staff (July 27, 2010); Sabina Dewan, associate director of international economic policy, the Center for American Progress, conversation with Panel staff (July 26, 2010).

d. The Power of Informal Coordination Networks

Much of the coordination that occurred during the crisis took the form of informal communications.[472] In some situations, Treasury officials picked up a phone to call their foreign counterparts; in others, small groups of countries gathered to share information. Informal communication helped officials to stay informed as to what their counterparts were doing, which was particularly important because of the speed at which the crisis unfolded. For example, according to then-Secretary Paulson, Treasury officials communicated regularly with foreign governments about a variety of subjects, including Fannie Mae and Freddie Mac. In addition, Secretary Paulson himself would occasionally talk to very senior foreign officials during critical times.[473]

In other cases, without any direct communication, one country's action on a particular issue inspired another country to act.[474] In some cases, these parallel actions were due to competitive pressures—in this manner, competition fostered outcomes that looked from a distance as though they had been the product of collaboration. In other cases, such as the stress tests, one country's actions served as a best practices template that other countries could employ when they faced similar challenges.[475] Some experts maintain that few examples of real coordination exist—in most cases, one country simply emulated the rescue efforts of another.[476]

It is also possible that as the crisis developed, informal coordination efforts hardened into more formal processes. The G–20 supplanted the G–8 as the primary international economic negotiating body, possibly in part because the large volume of information being communicated between G–8 participants and other countries made it easier to bring those countries directly to the negotiating table. The expansion served the purpose of raising the views of countries with emerging markets,[477] and also permitted policymakers to resolve many issues within the context of a single negotiating body.

The emergence of the G–20 also reflects the importance of symbolism and tone in crisis response.[478] Regardless of the number of concrete measures that have been implemented as a direct result of G–20 summits, the meetings facilitated aggressive action by governments across the globe by setting a tone that the international community supported timely, substantial economic interventions.

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[472] Henry M. Paulson, secretary of the Treasury (2006–2009), conversation with Panel staff (Aug. 5, 2010); Treasury conversations with Panel staff (July 22, 2010); Simon Johnson, professor at MIT and former chief economist of the International Monetary Fund, conversation with Panel staff (July 30, 2010).

[473] Henry M. Paulson, secretary of the Treasury (2006–2009), conversations with Panel staff (Aug. 5, 2010).

[474] *See* Section C.2.c, *supra.*

[475] *See* Section C.2, *supra.*

[476] Vincent Reinhart, resident scholar, American Enterprise Institute, conversation with Panel staff (July 19, 2010); Sabina Dewan, associate director of international economic policy, the Center for American Progress, conversation with Panel staff (July 26, 2010); Simon Johnson, professor at MIT and former chief economist of the International Monetary Fund, conversation with Panel staff (July 30, 2010).

[477] Clay Lowery, assistant secretary of international affairs (2005–2009), conversation with Panel staff (July 23, 2010).

[478] Treasury conversations with Panel staff (July 22, 2010).

As one Treasury official stated, the goal was to use a "show of force" to present a common front in fighting the financial crisis.[479]

F. Conclusions and Recommendations

The international response to the crisis that started in 2007 developed on an ad hoc, informal, jurisdiction-by-jurisdiction basis. The G–7/G–8, G–20, and multinational organizations such as the IMF all played a significant role in the rescue and an even larger role in the subsequent reform efforts. The international response was by no means uncoordinated; however, governments ultimately made their decisions based on an evaluation of what was best for their own banking sector and their domestic economy, and consideration of the specific impact of their actions on either the financial institutions or banking sector or the economies of other jurisdictions was not a high priority. This owed to both the rapid and brutal pace of the crisis, as well as the absence of effective cross-border crisis response structures. Ultimately, this meant that the assistance that was provided to specific troubled institutions depended very much on where they were headquartered.

Despite the limitations of international coordination, most countries ultimately intervened in similar ways, using the same basic set of policy tools: capital injections to financial institutions, guarantees of debt or troubled assets, asset purchases, and expanded deposit insurance. As the report illustrates, macro-economic responses taken by central banks, which had a broader discretion to design liquidity facilities, were the most coordinated.

Although these ad hoc actions ultimately restored a measure of stability to the international system, and the role of the capital injection programs adopted by the governments of both the United Kingdom and the United States was key to that stability, there is no doubt that international cooperation could be improved. Even when several governments came together to rescue a specific ailing institution over a short period, as in the rescues of Dexia and Fortis, national interests came to the fore. Instances of effective collaboration to orchestrate broader, market-wide interventions occurred on a more limited basis. The internationalization of the financial system has, in short, outpaced the ability of national regulators to respond to global crises.

In light of the international integration of markets, and in light of the fact that some of the recipients of rescue funds were large international institutions, it was inevitable that rescue funds would flow across borders. In the absence of reliable data, however, it is possible to say only that it seems likely that U.S. money had more impact on non-U.S. institutions and economies than non-U.S. rescue funds had on the United States, even after adjusting for the relative size of the various jurisdictions' rescues. Because Treasury has gathered very little data on how bailout funds flowed overseas, however, neither students of the current crisis nor those dealing with future rescue efforts will have access to all the information needed to make well-informed decisions. One of the most crucial problems in the crisis was the lack of transparency about which parties were exposed and to whom they were exposed, and where

[479] Treasury conversations with Panel staff (July 22, 2010).

cash flowed could be helpful in informing future estimates of exposure.

In the interests of transparency and completeness, and to help inform regulators' actions in a world that is likely to become ever more financially integrated, the Panel strongly urges Treasury to collect and report more data about how TARP and other rescue funds flowed internationally, and to document the impact that the U.S. rescue had overseas. Treasury should create and maintain a database of this information and should urge foreign regulators to collect and report similar data. Information of this type would have enabled regulators in all jurisdictions to formulate a more tailored and coordinated response, to know with whom they should have coordinated those responses, and to anticipate better the effects of any actions taken.

In enacting the TARP, Congress explicitly required Treasury to coordinate its financial stability efforts with those of other nations. The crisis underscored the fact that the international community's formal mechanism to plan in advance for potential financial crises is limited. Financial crises have occurred many times in the past and will occur again in the future, and policymakers would do well to have plans in place before they happen, rather than responding, however well, on an ad hoc basis at the peak of the storm. Moving forward, it is essential for the international community to gather information about the international financial system, identify vulnerabilities, and plan for emergency responses to a wide range of potential future crises. U.S. regulators should encourage regular crisis planning and financial "war gaming." Without this kind of cross-national forward planning, efforts in the United States to limit exposure and to address the impact of "too big to fail" institutions will be undermined.

Finally, international bodies such as the FSB and the BIS are likely to become ever more important in crisis response and regulation. For this reason, it is crucial that their dealings, and the interaction of U.S. regulators with them, are open and transparent and that U.S. regulators make clear to policymakers the impact that such bodies have on the U.S. banking industry and broader economy. The FSB especially should be sensitive to the transparency of its processes.

ANNEX I: TABLES

FIGURE 20: GLOBAL FINANCIAL RESCUE EFFORTS BY COUNTRY (AS OF MAY 2010) [i]

[Billions of USD] [ii]

			GDP [iii]	Bank Assets [iv]	Commitments		Outlays	
			2007	2007	Percent of GDP	Percent Bank Assets	Percent of GDP	Percent Bank Assets
Australia	Commitments	826.2	950	1,680	86.9	49.2	.....	.....
	Outlays	162.8	.....	.....	.....	.....	17.1	9.7
Belgium	Commitments	NA	459	2,324	NA	NA	.....	.....
	Outlays	221.6	.....	.....	.....	.....	48.3	9.5
France	Commitments	468.0	2,594	10,230	18.0	4.6	.....	.....
	Outlays	199.7	.....	.....	.....	.....	7.7	2.0
Germany	Commitments	658.8	3,321	6,600	19.8	10.0	.....	.....
	Outlays	406.6	.....	.....	.....	.....	12.2	6.2
Iceland [v]	Commitment [vi]	13.5	20	47	66.2	28.8	.....	.....
	Outlays [vii]	1.4	.....	.....	.....	.....	6.9	3.0
Ireland	Commitments	802.9	261	1,631	307.4	49.2	.....	.....
	Outlays	137.0	.....	.....	.....	.....	52.4	8.4
Italy	Commitments	85.1	2,118	4,336	4.0	2.0	.....	.....
	Outlays	5.6	.....	.....	.....	.....	0.3	0.1
Japan	Commitments [viii]	54.6	4,384	10,087	1.2	0.5	.....	.....
	Outlays [ix]	54.6	.....	.....	.....	.....	1.2	0.5
Luxembourg	Commitments	NA	50	1,348	NA	NA	.....	.....
	Outlays	13.0	.....	.....	.....	.....	26.2	1.0
Netherlands	Commitments	301.9	777	3,869	38.8	7.8	.....	.....
	Outlays	209.4	.....	.....	.....	.....	26.9	5.4
Spain	Commitments	341.7	1,440	2,979	23.7	11.5	.....	.....
	Outlays	136.6	.....	.....	.....	.....	9.5	4.6
Switzerland	Commitments	61.8	434	3,620	14.2	1.7	.....	.....
	Outlays	56.5	.....	.....	.....	.....	13.0	1.6
United Kingdom	Commitments	487.2	2,803	11,655	17.4	4.2	.....	.....
	Outlays	610.0	.....	.....	.....	.....	21.8	5.2
United States [x]	Commitments	2,995.2	13,807	11,194	21.7	26.8	.....	.....
	Outlays	1,630.6	.....	.....	.....	.....	11.8	14.6

[i] Commitment and outlay data for all countries compiled from the European Central Bank (ECB) unless noted otherwise. European Central Bank, *Extraordinary Measures in Extraordinary Times: Public Measures in Support of the Financial Sector in the EU and the United States* (July 2010) (online at www.ecb.int/pub/pdf/scpops/ecbocp117.pdf). Government support programs include capital injection, liability guarantees, and asset support unless noted otherwise. Commitment data not available for all forms of assistance and may be understated.

[ii] Foreign currency values were converted to USD using an average of daily EUR–USD exchange rates between 10/1/2008 and 5/31/2010. Averages computed using Bloomberg data service (accessed Aug. 11, 2010).

[iii] International Monetary Fund, *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risks,* at 177 (Apr. 2009) (online at www.imf.org/External/Pubs/FT/GFSR/2009/01/pdf/text.pdf); International Monetary Fund, *World Economic Outlook Database* (Apr. 2010) (online at www.imf.org/external/pubs/ft/weo/2010/01/weodata/download.aspx). Bank assets for Australia, Iceland, and India compiled using Bloomberg data service (accessed Aug. 11, 2010).

[iv] *Id.*

[v] For the reasons outlined in note vi, *infra,* this percentage is substantially understated and should not be directly compared those of other nations on this table. Special Investigative Commission, *Report of the Special Investigative Commission: Depositors' and Investors' Guarantee Fund and Deposit Guarantees in General,* at 65 (Apr. 12, 2010) (online at sic.althingi.is/pdf/RNAvefKafli17Enska.pdf); Mayer Brown, *Summary of Government Interventions in Financial Markets: Iceland,* at 3–4 (Sept. 8, 2009) (online at www.mayerbrown.com/publications/article.asp?id=7850&nid=6).

[vi] The $13.5 billion in commitments shown here consists only of direct capital injections to banks and guarantees of domestic bank deposits. It does not include other assistance, including guarantees of certain foreign deposits, central bank liquidity support, or a $10 billion IMF rescue package for the Icelandic government. Total commitments of government assistance exceed $13.5 billion and almost certainly exceed GDP, but are difficult to quantify given the scale of problems Iceland experienced and the confusion caused by the crisis. For example, the Icelandic central bank has not published detailed statistics on the banking system since 2007. Central Bank of Iceland (Sedlabanki), *Monetary Statistics* (May 2009) (online at www.sedlabanki.is/?pageid=552&itemid=5a037662-26ea-477d-bda8-d71a6017cc05&nextday=21&nextmonth=2). Other aspects of the Icelandic crisis are discussed in Sections C.1.b and C.1.c, and in Figure 17, *supra.*

[vii] Includes direct capital injections only. Iceland's outlays considerably exceeded this amount, as explained in note vi, *supra.*

[viii] Deposit Insurance Corporation of Japan, *List of Capital Injection Operations Pursuant to the Financial Functions Strengthening Act* (online at www.dic.go.jp/english/e_katsudou/e_katsudou3-5.html) (accessed Aug. 10, 2010); Bank of Japan, *Outright Purchases of Corporate Financing Instruments* (Jan. 22, 2009) (online at www.boj.or.jp/en/type/release/adhoc09/un0901b.pdf); Bank of Japan, *The Bank of Japan to Resume Stock Purchases Held by Financial Institutions* (Feb. 3, 2009) (online at www.boj.or.jp/en/type/release/adhoc09/fss0902a.pdf); Bank of Japan, *Provision of Subordinated Loans to Banks* (Mar. 17, 2009) (online at www.boj.or.jp/en/type/release/adhoc09/fsky0903a.htm). *See also* Takafumi Sato, *Global Financial Crisis—Japan's Experience and Policy Response* (Oct. 20, 2009) (online at www.frbsf.org/economics/conferences/aepc/2009/09_Sato.pdf).

[ix] *Id.*

[x] U.S. financial support totals include Federal Reserve liquidity facilities. Congressional Oversight Panel, *June Oversight Report: The AIG Rescue, Its Impact on Markets, and the Government's Exit Strategy,* at 318–319 (June 10, 2010) (online at cop.senate.gov/documents/cop-061010-report.pdf).

FIGURE 21: FEDERAL RESERVE LIQUIDITY PROGRAMS

Start Date	End Date	Description	Maximum Commitment	Final Disposition
Term Asset-Backed Securities Loan Facility (TALF)				
	June 30, 2010.	FRBNY makes loans on a collateralized basis to holders of eligible asset-backed securities (ABS) and commercial mortgage-backed securities (CMBS).		
Term Auction Facility (TAF)				
December 12, 2007.	March 8, 2010.	The TAF provided credit through an auction mechanism to depository institutions in generally sound financial condition. The TAF offered 28-day and, beginning in August 2008, 84-day loans.		
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF)				
September 18, 2008.	February 1, 2010.	The AMLF was a lending facility that financed the purchase of high-quality asset-backed commercial paper from money market mutual funds (MMMFs) by U.S. depository institutions and bank holding companies.		
Commercial Paper Funding Facility (CPFF)				
October 7, 2008.	February 1, 2010.	The CPFF provided a liquidity backstop to U.S. issuers of commercial paper through a specially created limited liability company (LLC) called CPFF LLC. This LLC purchased three-month unsecured and asset-backed commercial paper directly from eligible issuers.	The CPFF's holdings of commercial paper peaked at $350 billion in January 2009.	The CPFF incurred no losses on its commercial paper holdings, and accumulated nearly $5 billion in earnings, primarily from interest income, credit enhancement fees, and registration fees.
Primary Dealer Credit Facility (PDCF)				
March 16, 2008.	February 1, 2010.	An overnight loan facility that provided funding to primary dealers.		
Term Securities Lending Facility (TSLF)				
March 11, 2008.	February 1, 2010.	FRBNY lent Treasury securities to primary dealers for 28 days against eligible collateral in two types of auctions.		
Money Market Investor Funding Facility (MMIFF)				
October 21, 2008.	.....	FRBNY provided senior secured funding to SPVs to facilitate a private-sector initiative to finance the purchase of eligible assets from eligible investors.		

FIGURE 22: RECIPROCAL FOREIGN EXCHANGE SWAP LINES WITH THE UNITED STATES, 2007–2009 [480]

[Dollars in millions]

Country	Agreement Date	Original Amount	Changes to Original Agreement	Total Amount	Expiration of Swap Line [481]
European Union	12/12/2007	$20,000	Swap line extended and increased 7 times until the Fed removed the cap on 10/13/2008.	[482] Full allotment.	2/1/2010
Switzerland	12/12/2007	4,000	Swap line increased 6 times until the Fed removed the cap on 10/13/2008.	[483] Full allotment.	2/1/2010
Japan	9/18/2008	60,000	Swap line increased twice before the Fed removed the cap on 10/14/2008.	[484] Full allotment.	2/1/2010
United Kingdom	9/18/2008	40,000	Swap line increased twice before the Fed removed the cap on 10/13/2008.	[485] Full allotment.	2/1/2010
Canada	9/18/2008	10,000	Swap line increased once on 9/29/2008.	$30,000	2/1/2010
Australia	9/24/2008	10,000	Swap line increased once on 9/29/2008.	$30,000	2/1/2010
Sweden	9/24/2008	10,000	Swap line increased once on 9/29/2008.	$30,000	2/1/2010
Denmark	9/24/2008	5,000	Swap line increased once on 9/29/2008.	$15,000	2/1/2010
Norway	9/24/2008	5,000	Swap line increased once on 9/29/2008.	$15,000	2/1/2010
New Zealand	10/28/2008	15,000	None	$15,000	2/1/2010
Brazil	10/29/2008	30,000	None	$30,000	2/1/2010
Mexico	10/29/2008	30,000	None	$30,000	2/1/2010
South Korea	10/29/2008	30,000	None	$30,000	2/1/2010
Singapore	10/29/2008	30,000	None	$30,000	2/1/2010

[480] Source: Board of Governors of the Federal Reserve System.

As reflected in the chart, the swap lines expired on February 1, 2010; however, as a result of U.S. dollar short-term funding problems in Europe, in May 2010 the Federal Reserve reestablished swap lines with the European Union, Switzerland, the United Kingdom, Canada, and Japan. Each swap line will expire in January 2011. Board of Governors of the Federal Reserve System, *Press Release* (May 10, 2010) (online at www.federalreserve.gov/newsevents/press/monetary/20100510a.htm); Board of Governors of the Federal Reserve System, *Press Release* (May 9, 2010) (online at www.federalreserve.gov/newsevents/press/monetary/20100509a.htm).

[481] The Federal Reserve extended the swap lines with each country multiple times. On June 25, 2009, it extended the swap lines with all central banks until February 1, 2010. Board of Governors of the Federal Reserve System, *Press Release* (June 25, 2009) (online at www.federalreserve.gov/newsevents/press/monetary/20090625a.htm).

[482] On October 13, 2008 the Federal Reserve removed the cap on the amount the European Central Bank (ECB) could draw on the swap line. Board of Governors of the Federal Reserve System, *Press Release* (Oct. 13, 2008) (online at www.federalreserve.gov/newsevents/press/monetary/20081013a.htm) (hereinafter ''Oct. 13 Federal Reserve Press Release''). Prior to removing the cap, the ECB was authorized to draw up to $240 billion. Board of Governors of the Federal Reserve System, *Press Release* (Sept. 29, 2008) (online at www.federalreserve.gov/newsevents/press/monetary/20080929a.htm) (hereinafter ''Sept. 29 Federal Reserve Press Release'').

[483] On October 13, 2008 the Federal Reserve removed the cap on the amount the Swiss National Bank (SNB) could draw on the swap line. Sept. 29 Federal Reserve Press Release, *supra* note 482. Prior to removing the cap, the SNB was authorized to draw up to $60 billion. Sept. 29 Federal Reserve Press Release, *supra* note 482.

[484] On October 14, 2008 the Federal Reserve removed the cap on the amount the Bank of Japan (BOJ) could draw on the swap line. Board of Governors of the Federal Reserve System, *Press Release* (Oct. 14, 2008) (online at www.federalreserve.gov/newsevents/press/monetary/20081014d.htm). Prior to removing the cap, the BOJ was authorized to draw up to $120 billion. Sept. 29 Federal Reserve Press Release, *supra* note 482.

[485] On October 13, 2008, the Federal Reserve removed the cap on the amount the Bank of England (BOE) could draw on the swap line. Sept. 29 Federal Reserve Press Release, *supra* note 482. Prior to removing the cap, the BOE was authorized to draw up to $80 billion. Sept. 29 Federal Reserve Press Release, *supra* note 482.

ANNEX II: CASE STUDY: THE FOREIGN BENEFICIARIES OF PAYMENTS MADE TO ONE OF AIG'S DOMESTIC COUNTERPARTIES

The interconnected nature of the international financial system and the ease with which cash flows across national boundaries have been noted throughout this report. Although the Panel cannot obtain information about the ultimate recipients of all TARP payments, the Panel now has a more complete picture of the dealings between AIG, recipient of one of the largest U.S. rescue packages, and Goldman Sachs. These dealings provide a useful example of the way in which a payment to a U.S. company, which fulfills its contractual obligations to its U.S. counterparties, ultimately ends up in the hands of institutions all around the world. While the information below relates exclusively to Goldman and its relationships with foreign counterparties, it is likely that many other beneficiaries of government rescue efforts had similar counterparty relationships. Accordingly, it is also likely that these relationships produced significant indirect benefits for foreign institutions.

As the following data make clear, taxpayer aid to AIG became aid to Goldman, and aid to Goldman became aid to a number of domestic and foreign investors. In some cases, the aid was in the form of repayment in full of obligations that, without government help, could have ended in default. In other cases, the aid was in the form of guarantees that other parties did not have to pay because the government prevented any defaults.

AIG provided credit default swap (CDS) protection on a number of collateralized debt obligations (CDOs), which were the source of continuing collateral demands on AIG. As part of the AIG rescue, the CDOs underlying the CDSs were acquired by a special-purpose vehicle primarily funded by the government, Maiden Lane III. The entities set out in the table below held CDSs written by Goldman against the CDOs that were eventually acquired by Maiden Lane III. In order to sell those CDOs to Maiden Lane III, in most cases Goldman had to obtain them from these counterparties, so the Maiden Lane III funds effectively flowed to Goldman's counterparties.[486] Nearly all of these second-level counterparties, both by number and dollar amount, were non-U.S. institutions, with European banks making up by far the largest contingent.

FIGURE 23: GOLDMAN'S COUNTERPARTIES TO MAIDEN LANE III CDOs

[Dollars in millions]

Institution	Total Funds Received from ML3
DZ Bank	$2,504
Banco Santander Central Hispano SA	1,544
Rabobank Nederland-London Branch	852
ZurcherKantonalbank	998
Dexia Bank SA	865
BGI INV FDS GSI AG	633
Calyon-Cedex Branch	663
The Hongkong & Shanghai Banking Corporation	631

[486] June Oversight Report, *supra* note 10, at 110–11, 174 n.668 (discussing that detailed information was not available on the topic of "counterparties' counterparties" as beneficiaries of the government rescue).

FIGURE 23: GOLDMAN'S COUNTERPARTIES TO MAIDEN LANE III CDOs—Continued

[Dollars in millions]

Institution	Total Funds Received from ML3
Depfa Bank Plc	692
Skandinaviska Enskilda Bankensweden	365
Sierra Finance	322
PGGM	440
Natixis	399
Zulma Finance	661
Stoneheath	300
Hospitals of Ontario Pension Plan	273
Venice Finance	363
KBC Asset Management NVD Star Finance	308
MNGD Pension Funds LTD	244
Shackleton Re Limited	128
Infinity finance plc	375
Legal & General Assurance	87
Barclays	102
GSAM Credit CDO LTD	84
Signum Platinum	102
Lion Capital Global Credit I LTD	16
Kommunalkredit Int Bank	24
Credit Linked Notes LTD	14
Ocelot CDO I PLC	9
Hoogovens PSF ST	46
Hypo Public Finance Bank	10
Royal Bank of Scotland	5
Total	**14,059**

The table below identifies 87 entities that benefited indirectly from government assistance provided to AIG. Each of these entities wrote credit default swap protection on AIG for Goldman. Of these 87 entities, 43 are foreign. When the government intervened to prevent AIG from failing, these foreign entities were not required to make payments on that protection, which they would have been obligated to do in the event of an AIG default.[487] Foreign hedge providers made up 43.4 percent of the total, by dollar amount, with European banks and other financial institutions being most heavily represented.

FIGURE 24: GOLDMAN COUNTERPARTIES' EXPOSURE TO AN AIG DEFAULT

Institution	Net Exposure to Goldman on AIG CDSs
Citibank, N.A.	$402,246,000
Credit Suisse International	309,730,000
Morgan Stanley Capital Services Inc.	242,500,000
JPMorgan Chase Bank N.A. London Branch	216,040,000
Lehman Brothers Special Financing, Inc.	174,780,082
Swiss Re Financial Products Corporation	132,100,000
PIMCO Funds Total Return Fund	120,000,000
Deutsche Bank AG London Branch	87,246,700
KBC Financial Products Cayman Islands Ltd.	84,650,000
Royal Bank of Canada London Branch	76,000,000
PIMCO Funds Low Duration Fund	70,200,000

[487] June Oversight Report, *supra* note 10, at 111, 174 n.669 (discussing that detailed information was not available on the topic of hedge providers as "indirect beneficiaries" of the government rescue).

FIGURE 24: GOLDMAN COUNTERPARTIES' EXPOSURE TO AN AIG DEFAULT—Continued

Institution	Net Exposure to Goldman on AIG CDSs
Société Générale	62,280,000
Wachovia Bank, National Association	60,214,000
Natixis Financial Products Inc.	56,345,000
Merrill Lynch International	41,435,000
Natixis	37,064,400
Bank of Nova Scotia, The	36,165,000
Credit Agricole Corporate and Investment Bank	34,800,000
BNP Paribas	31,500,000
Dresdner Bank AG London Branch	29,110,000
Alphadyne International Master Fund, Ltd.	27,771,000
Bank of America, National Association	25,070,000
MBIA INC.	25,000,000
Bank of Montreal London Branch	25,000,000
Commerzbank Aktiengesellschaft	25,000,000
Lyxor Starway SPC Lyxor Starway PFLO	22,729,000
Unicredit Bank AG	20,000,000
Government of Singapore Investment Corporation PTE Ltd	20,000,000
Banco Finantia SA	20,000,000
Bank of Montreal Chicago Branch	18,000,000
Wicker Park CDO I, Ltd.	17,500,000
Bluecorr Fund, LLC	15,600,000
Suttonbrook Capital Portfolio LP	15,000,000
Citibank, N.A. London Branch	12,500,000
BlueMountain Timberline Ltd.	12,000,000
PIMCO Global Credit Opportunity Master Fund LDC PIMCO	12,000,000
AQR Absolute Return Master Account L.P.	11,750,000
Moore Macro Fund, L.P.	10,000,000
Norges Bank	10,000,000
JPMorgan Chase Bank, National Association	9,246,000
Fortis Bank	8,000,000
PIMCO Combined Alpha Strategies Master Fund LDC PIMCO	8,000,000
WestLB AG London Branch	8,000,000
AQR Global Asset Allocation Master Account, L.P.	7,750,000
Citadel Equity Fund Ltd.	7,400,000
Allianz Global Investors KAG Allianz PIMCO Mobil Fonds	7,000,000
Barclay's Bank plc	6,090,000
PIMCO Combined Alpha Strategies Master Fund LDC PIMCO	6,000,000
Arrowgrass Master Fund Ltd	5,500,000
Mizuho International plc	5,400,000
Rabobank International London Branch	5,000,000
Standard Chartered Bank Singapore Branch	5,000,000
Millennium Park CDO I, Ltd.	5,000,000
III Relative Value Credit Strategies Hub Fund Ltd.	5,000,000
Internationale KAG mbH INKA B	4,500,000
Goldentree Master Fund, Ltd.	4,480,000
National Bank of Canada	3,000,000
Loomis Sayles Multistrategy Master Alpha, Ltd.	3,000,000
PIMCO Variable Insurance Trust Low Duration Bond Portfolio	2,700,000
Tiden Destiny Master Fund Limited	2,500,000
Stichting Pensioenfonds Oce	2,450,000
Intesa Sanpaolo SpA	2,000,000
PIMCO Global Credit Opportunity Master Fund LDC PIMCO	2,000,000
DCI Umbrella Fund plc Diversified Cred Investments FD Three	2,000,000
Halbis Distressed Opportunities Master Fund LTD.	2,000,000
UBS Funds, The, UBS Dynamic Alpha Fund	1,250,000
Goldentree Master Fund II, Ltd.	1,180,000
RP Rendite Plus Multi Strategie Investment Grade MSIG	1,100,000
Cairn Capital Structured Credit Master Fund Limited	1,000,000
Allianz Global Inv KAG mbH DBI PIMCO Global Corp Bd Fds	1,000,000
PIMCO Funds: Pacific Investment Mgmt Serfloating Income Fd	800,000
UBS Dynamic Alpha Strategies Master Fund Ltd.	750,000
Allianz Global Investors KAG mbH DIT FDS Victoria DFS	600,000
PIMCO Funds: Global Investors Series plc Low Ave Duration Fd	600,000

FIGURE 24: GOLDMAN COUNTERPARTIES' EXPOSURE TO AN AIG DEFAULT—Continued

Institution	Net Exposure to Goldman on AIG CDSs
Internationale Kapitalanlagegesellschaft mbH PKMF INKA	550,000
BFT Vol 2	500,000
PIMCO Funds Low Duration Fund II	500,000
Goldentree Credit Opportunities Master Fund, Ltd.	340,000
Embarq Savings Plan Master Trust	300,000
Russell Investment Company Russell Short Duration Bond Fund	300,000
PIMCO Funds Low Duration Fund III	300,000
Equity Trustees Limited PIMCO Australian Bond Fund	300,000
Public Education Employee Retirement System of Missouri	200,000
PIMCO Bermuda Trust II PIMCO JGB Floater Foreign Strategy Fd	200,000
D.B. Zwirn Special Opportunities Fund, Ltd.	101,500
PIMCO Bermuda Trust II PIMCO Bermuda JGB Floater US Stra Fd	100,000
Frank Russell Investment Company Fixed Income II Fund	100,000
Total	**$2,790,413,682**

SECTION TWO: TARP UPDATES SINCE LAST REPORT

A. TARP Repayments

In July 2010, Fulton Financial Corporation and Green City Bancshares, Inc. fully repurchased their preferred shares under CPP. Treasury received $377 million in repayments from these two companies. On July 14, 2010, Green City Bancshares also repurchased $33,000 in preferred shares that Treasury held from warrants that were already exercised. A total of 20 banks have fully repaid $16.5 billion in preferred equity CPP investments in 2010. As of July 30, 2010, 78 institutions have redeemed their CPP investments.

B. CPP Warrant Dispositions

As part of its investment in senior preferred stock of certain banks under the CPP, Treasury received warrants to purchase shares of common stock or other securities in those institutions. In July, Discover Financial Services and Bar Harbor Bancshares repurchased their warrants from Treasury for $172.3 million in total proceeds. The Panel's best valuation estimate at repurchase date for Discover and Bar Harbor warrants were $166 million and $518,511 respectively. As of July 30, 2010, the warrants from 52 banks have been liquidated. Of these banks, 39 have repurchased their warrants; Treasury sold the warrants for 13 institutions at auction.

C. Conference on the Future of Housing Finance Reform

On July 27, 2010, President Obama announced plans to hold the "Conference on the Future of Housing Finance" on August 17, 2010. The conference will be the culmination of a series of events meant to gather public input on a housing finance reform proposal, which is planned to be sent to Congress in January 2011. In April 2010, Treasury and the U.S. Department of Housing and Urban Development issued a series of questions for public comment regarding plans for a more stable housing financing system. Among the topics addressed in the questions were federal housing finance objectives in the context of broader housing policy objectives, the role of the federal government in a housing financing system, and suggested improvements to the current financing system.

D. Community Development Capital Initiative

On July 30, 2010, two companies exchanged their CPP investments for equivalent investments under the Community Development Capital Initiative (CDCI). These were the first two transactions under the program. University Financial Corp., Inc., which received $11.9 million for subordinated debentures from CPP, received an additional $10.2 million from CDCI upon its entrance into the program. Guaranty Financial Corporation received $14 million for subordinated debentures from CPP; however, Treasury did not make an additional investment in this bank as part of the exchange. As of July 30, 2010, the total CDCI investment amount was $36.1 million.

The CDCI was announced on February 3, 2010 as a means of providing lower-cost capital to Community Development Financial Institutions (CDFIs) that lend to small businesses in the country's economically hard-hit areas. As participating CDFIs, Guaranty Financial and University Financial receive capital investments at a 2 percent initial dividend rate. The rate will increase to 9 percent after eight years if there are any outstanding investments in the participating institution. Under the CPP, banks pay an initial 5 percent dividend rate, which increases to 9 percent after only five years.

E. HFA Hardest Hit Fund Program

On March 29, 2010, Treasury announced a second round of HFA Hardest Hit Fund assistance with a focus on the states with large concentrations of people living in economically distressed areas. On August 3, 2010, the Administration approved the use of $600 million in "Hardest Hit Fund" foreclosure-prevention funding by the Housing Finance Agencies (HFAs). The state HFAs will receive the following amounts from the HFA Hardest Hit Fund: North Carolina ($159 million), Ohio ($172 million), Oregon ($88 million), Rhode Island ($43 million), and South Carolina ($138 million). Programs in these states aim to provide mortgage assistance for the unemployed or underemployed, as well as to assist in reduction or settlement of second liens, payment for arrearages, and facilitation of short sales and/or deeds-in-lieu to avoid foreclosure. Last month, the Administration approved $1.5 billion in HFA funding for the top five states most affected by the decline in housing prices.

F. Metrics

Each month, the Panel's report highlights a number of metrics that the Panel and others, including Treasury, the Government Accountability Office (GAO), Special Inspector General for the Troubled Asset Relief Program (SIGTARP), and the Financial Stability Oversight Board, consider useful in assessing the effectiveness of the Administration's efforts to restore financial stability and accomplish the goals of EESA. This section discusses changes that have occurred in several indicators since the release of the Panel's July report and includes two additional indicators that aid in understanding the international aspects of the financial crisis.

• **Financial Indices.** Since its post-crisis trough in April 2010, the St. Louis Financial Stress Index has increased over elevenfold, although it has fallen by a third since the Panel's July report.[488]

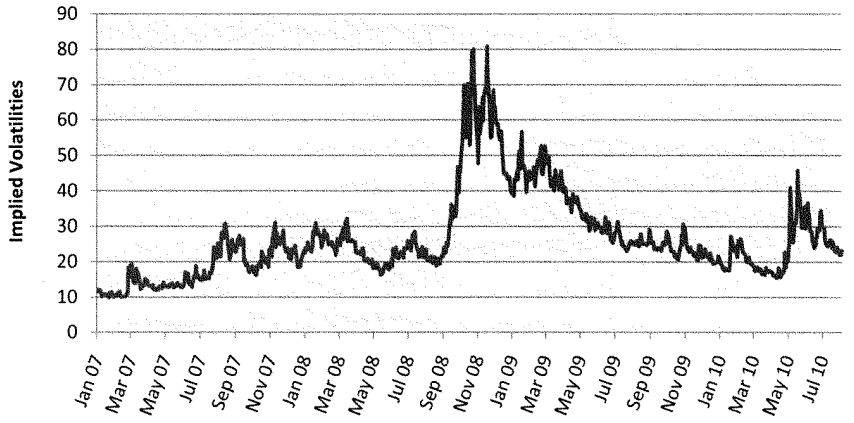
[488] Federal Reserve Bank of St. Louis, *Series STLFSI: Business/Fiscal: Other Economic Indicators* (Instrument: St. Louis Financial Stress Index, Frequency: Weekly) (online at research.stlouisfed.org/fred2/categories/98) (accessed Aug. 5, 2010). The index includes 18 weekly data series, beginning in December 1993 to the present. The series are: effective federal funds rate, 2-year Treasury, 10-year Treasury, 30-year-Treasury, Baa-rated corporate, Merrill Lynch High Yield Corporate Master II Index, Merrill Lynch Asset-Backed Master BBB-rated, 10-year Treasury minus 3-month Treasury, Corporate Baa-rated bond minus 10-year Treasury, Merrill Lynch High Yield Corporate Master II Index minus 10-year Treasury, 3-month LIBOR–OIS spread, 3-month TED spread, 3-month commercial paper minus 3-month Treasury, the J.P. Morgan Emerging Markets Bond Index Plus, Chicago Board Options Exchange Market Volatility Index, Merrill Lynch Bond Market Volatility Index (1-month), 10-year nominal Treasury yield minus 10-year Treasury Inflation Protected Security yield, and Vanguard Financials Exchange-Traded Fund (equities). The index is constructed using principal components analysis after the data series are de-meaned and divided by their respective standard deviations to make them comparable units. The standard deviation of the index is set to 1. For more details on the con-

The recent trend suggests that financial stress continues moving towards its long-run norm. The index has decreased over three standard deviations from the starting date of EESA in October 2008, indicating better overall financial health since the initiation of TARP.

FIGURE 25: ST. LOUIS FEDERAL RESERVE FINANCIAL STRESS INDEX

Volatility has decreased of late. The Chicago Board Options Exchange Volatility Index (VIX) has fallen about 25 percent since the COP July report, although the level is still higher than its post-crisis low on April 12, 2010.

FIGURE 26: CHICAGO BOARD OPTIONS EXCHANGE VOLATILITY INDEX [489]



struction of this index, *see* Federal Reserve Bank of St. Louis, *National Economic Trends Appendix: The St. Louis Fed's Financial Stress Index* (Jan. 2010) (online at research.stlouisfed.org/publications/net/NETJan2010Appendix.pdf) (accessed Aug. 5, 2010).

[489] Data accessed through Bloomberg data service on August 5, 2010.

1. Interest Rates and Spreads

- **LIBOR Rates.** As of August 6, 2010, the 3-month and 1-month London Interbank Offer Rates (LIBOR), the prices at which banks lend and borrow from each other, were 0.411 and 0.293, respectively. Although they had increased significantly in the three preceding months, there has been a slight easing in these rates since the Panel's July Report. This may reflect the results of the European bank stress test. Over the longer term, rates remain heightened relative to pre-crisis levels.[490]

FIGURE 27: 3-MONTH AND 1-MONTH LIBOR RATES (AS OF AUGUST 6, 2010)

Indicator	Current Rates (as of 8/6/2010)	Percent Change from Data Available at Time of Last Report (6/24/2010)
3-Month LIBOR [491]	.411	(15.5)
1-Month LIBOR [492]	.293	(23.4)

[491] Data accessed through Bloomberg data service on August 3, 2010.
[492] Data accessed through Bloomberg data service on August 3, 2010.

Since the Panel's July report, interest rate spreads have generally fallen slightly. Thirty-year mortgage interest rates and 10-year Treasury bond yields have both declined recently and the conventional mortgage spread, which measures the 30-year mortgage rate over 10-year Treasury bond yields, has fallen very slightly since late June as well.[493]

The TED spread, which serves as an indicator for perceived risk in the financial markets, fell slightly since June as compared to nearly doubling over the month of May.[494] The LIBOR–OIS spread reflects the health of the banking system. While it increased over threefold from early April to July, it has fallen by almost a third since peaking in mid-July.[495] Decreases in the LIBOR–OIS spread and the TED spread suggest that hesitation among banks to lend to counterparties is receding.

The interest rate spread for AA asset-backed commercial paper, which is considered mid-investment grade, has fallen by about fourteen percent since the Panel's July report. The interest rate spread on A2/P2 commercial paper, a lower grade investment than AA asset-backed commercial paper, has fallen by over a quarter since the Panel's July report.

[490] Data accessed through Bloomberg data service on August 3, 2010.
[493] Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release H.15: Selected Interest Rates: Historical Data* (Instrument: Conventional Mortgages, Frequency: Weekly) (online at www.federalreserve.gov/releases/h15/data/Weekly_Thursday/H15_MORTG_NA.txt) (hereinafter "Federal Reserve Statistical Release H.15") (accessed Aug. 5, 2010).
[494] Federal Reserve Bank of Minneapolis, *Measuring Perceived Risk—The TED Spread* (Dec. 2008) (online at www.minneapolisfed.org/publications_papers/pub_display.cfm?id=4120).
[495] Data accessed through Bloomberg data service on Aug. 5, 2010.

FIGURE 28: INTEREST RATE SPREADS

Indicator	Current Spread (as of 7/31/2010)	Percent Change Since Last Report (7/1/2010)
Conventional mortgage rate spread [496]	1.52	(1.9)
TED Spread (basis points)	26.41	(27.3)
Overnight AA asset-backed commercial paper interest rate spread [497]	0.11	(14.1)
Overnight A2/P2 nonfinancial commercial paper interest rate spread [498]	0.19	(28.1)

[496] Federal Reserve Statistical Release H.15, *supra* note 493; Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release H.15: Selected Interest Rates: Historical Data* (Instrument: U.S. Government Securities/Treasury Constant Maturities/Nominal 10-Year, Frequency: Weekly) (online at www.federalreserve.gov/releases/h15/data/Weekly_Friday_/H15_TCMNOM_Y10.txt) (accessed Aug. 5, 2010).

[497] Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release: Commercial Paper Rates and Outstandings: Data Download Program* (Instrument: AA Asset-Backed Discount Rate, Frequency: Daily) (online at www.federalreserve.gov/DataDownload/Choose.aspx?rel=CP) (accessed Aug. 5, 2010); Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release: Commercial Paper Rates and Outstandings: Data Download Program* (Instrument: AA Nonfinancial Discount Rate, Frequency: Daily) (online at www.federalreserve.gov/DataDownload/Choose.aspx?rel=CP) (accessed Aug. 5, 2010). In order to provide a more complete comparison, this metric utilizes the average of the interest rate spread for the last five days of the month.

[498] Board of Governors of the Federal Reserve System, *Federal Reserve Statistical Release: Commercial Paper Rates and Outstandings: Data Download Program* (Instrument: A2/P2 Nonfinancial Discount Rate, Frequency: Daily) (online at www.federalreserve.gov/DataDownload/Choose.aspx?rel=CP) (accessed Aug. 5, 2010). In order to provide a more complete comparison, this metric utilizes the average of the interest rate spread for the last five days of the month.

FIGURE 29: TED SPREAD [499]

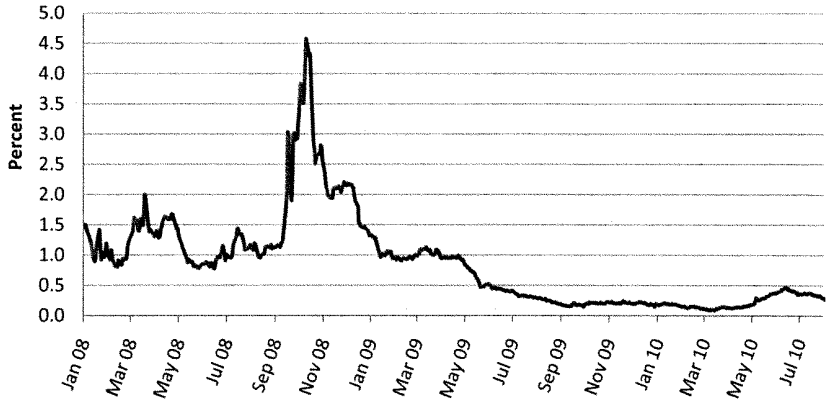
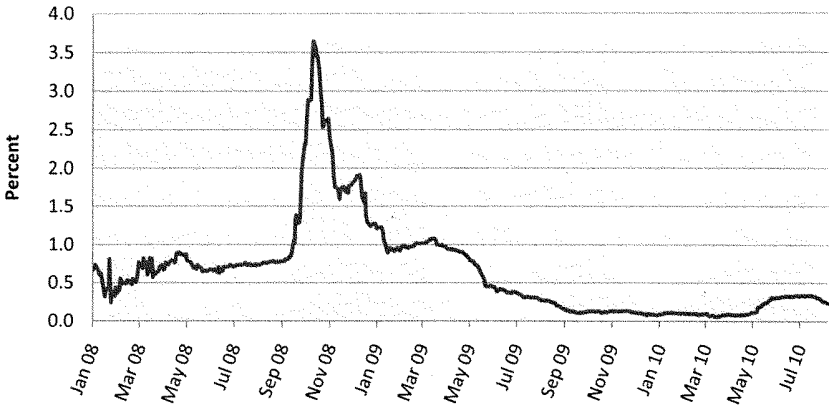


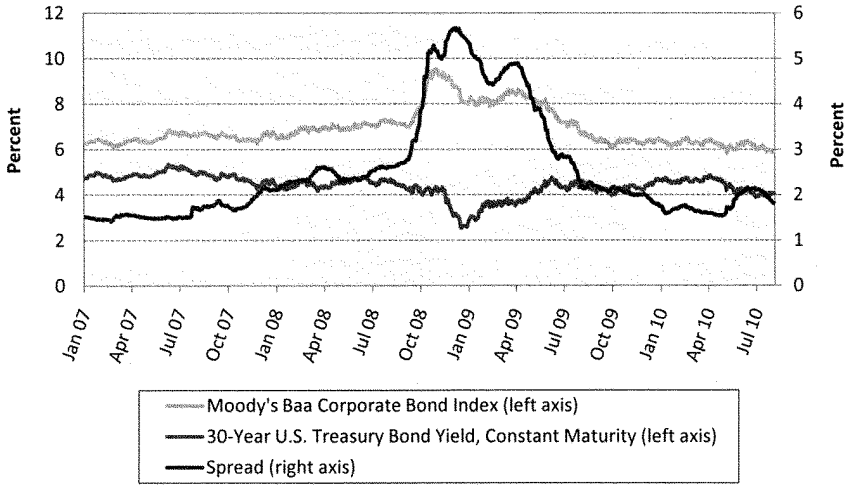
FIGURE 30: LIBOR-OIS SPREAD [500]



- **Corporate Bond Spread.** The spread between Moody's Baa Corporate Bond Yield Index and 30-year constant maturity U.S. Treasury Bond yields doubled from late April to mid-June. However, since mid-June, the trend has reversed and the spread has fallen about fifteen percent. This spread indicates the difference in perceived risk between corporate and government bonds, and a declining spread could indicate waning concerns about the riskiness of corporate bonds.

[499] Data accessed through Bloomberg data service on Aug. 3, 2010.
[500] Data accessed through Bloomberg data service on Aug. 6, 2010.

FIGURE 31: MOODY'S BAA CORPORATE BOND INDEX AND 30-YEAR U.S. TREASURY YIELD [501]



- **Housing Indicators.** Foreclosure actions, which consist of default notices, scheduled auctions, and bank repossessions, dropped 2 percent in May to 313,841. This metric is over 12 percent above the foreclosure action level at the time of the EESA enactment.[502] Foreclosure sales accounted for 31 percent of all residential sales in the first quarter of 2010.[503] Sales of new homes rose slightly to 330,000, but remain extremely low.[504] Both the Case-Shiller Composite 20-City Composite as well as the FHFA Housing Price Index increased slightly in May 2010. The Case-Shiller and FHFA indices are 6 percent and 3 percent, respectively, below their levels of October 2008.[505]

Additionally, Case-Shiller futures prices indicate a market expectation that home-price values will stay constant or decrease

[501] Federal Reserve Bank of St. Louis, *Series DGS30: Selected Interest Rates* (Instrument: 30-Year Treasury Constant Maturity Rate, Frequency: Daily) (online at research.stlouisfed.org/fred2/) (accessed June 28, 2010). Corporate Baa rate data accessed through Bloomberg data service on June 25, 2010.

[502] RealtyTrac, *Foreclosure Activity Press Releases* (Nov. 13 2008) (online at www.realtytrac.com/contentmanagement/pressrelease.aspx?channelid=9&itemid=5420).

[503] RealtyTrac, *Foreclosure Activity Press Releases* (June 30, 2010) (online at www.realtytrac.com/contentmanagement/pressrelease.aspx?channelid=9&itemid=9438).

[504] Sales of new homes in May were 276,000, the lowest rate since 1963. U.S. Census Bureau and U.S. Department of Housing and Urban Development, *New Residential Sales in June 2010* (July 26, 2010) (online at www.census.gov/const/newressales.pdf); U.S. Census Bureau, *New Residential Sales—New One-Family Houses Sold* (online at www.census.gov/ftp/pub/const/sold_cust.xls) (accessed Aug. 10, 2010).

[505] Most recent data available for May 2010. *See* Standard and Poor's, *S&P/Case-Shiller Home Price Indices,* (Instrument: Case-Shiller 20-City Composite Seasonally Adjusted, Frequency: Monthly) (online at www.standardandpoors.com/indices/sp-case-shiller-home-price-indices/en/us/?indexId=spusa-cashpidff-p-us---) (hereinafter "S&P/Case-Shiller Home Price Indices") (accessed Aug. 5, 2010); Federal Housing Finance Agency, *U.S. and Census Division Monthly Purchase Only Index* (Instrument: USA, Seasonally Adjusted) (online at www.fhfa.gov/webfiles/15669/MonthlyIndex_Jan1991_to_Latest.xls) (accessed Aug. 5, 2010) (hereinafter "FHFA Housing Price Index Data"). S&P has cautioned that the seasonal adjustment is probably being distorted by irregular factors. These distortions could include distressed sales and the various government programs. *See* Standard and Poor's, *S&P/Case-Shiller Home Price Indices and Seasonal Adjustment,* S&P Indices: Index Analysis (Apr. 2010).

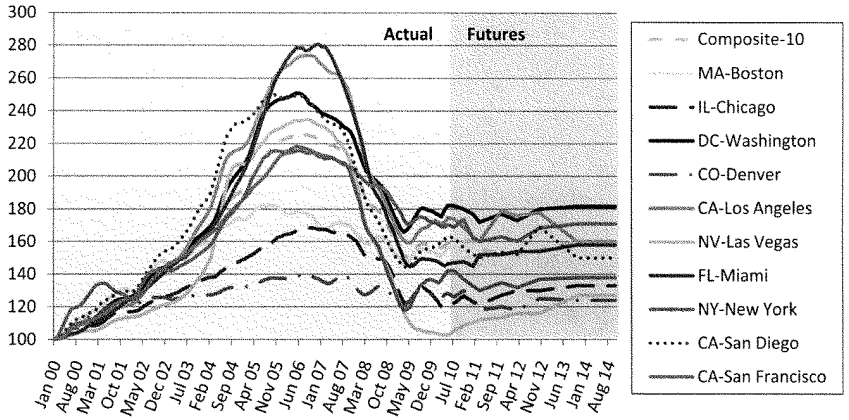
through the end of 2010.[506] These futures are cash-settled to a weighted composite index of U.S. housing prices, as well as to specific markets in 10 major U.S. cities, and are used both to hedge, by businesses whose profits and losses are related to any area of the housing industry, and to balance portfolios by businesses seeking exposure to an uncorrelated asset class. As such, futures prices are a composite indicator of market information known to date and can be used to indicate market expectations for home prices.

FIGURE 32: HOUSING INDICATORS

Indicator	Most Recent Monthly Data	Percent Change from Data Available at Time of Last Report	Percent Change Since October 2008
Monthly foreclosure actions[507]	313,841	(1.9)	12.3
S&P/Case-Shiller Composite 20 Index[508]	147.3	1.1	(5.7)
FHFA Housing Price Index[509]	196.0	0.5	(3.0)

[507] RealtyTrac, *Foreclosures* (online at www.realtytrac.com/home/) (accessed Aug. 6, 2010). Most recent data available for June 2010.
[508] S&P/Case-Shiller Home Price Indices, *supra* note 505. Most recent data available for May 2010.
[509] FHFA Housing Price Index Data, *supra* note 505. Most recent data available for May 2010.

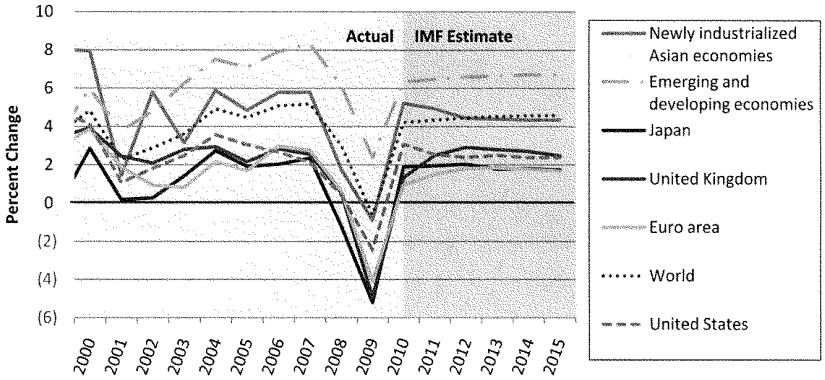
FIGURE 33: CASE-SHILLER HOME PRICE INDEX AND FUTURES VALUES[510]



- **International Indicators.** The crisis, while originating in the U.S. housing market, spread rapidly through the international financial system and resulted in recessions of varying degrees worldwide. While developing countries' growth rates fell steeply but never dropped below zero, the U.S. contraction was of less depth and less duration than those of the Euro area, United Kingdom, and Japan.

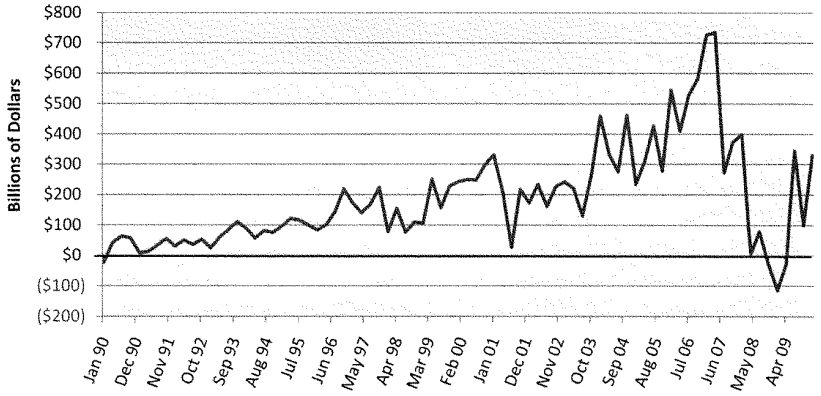
[506] Data accessed through Bloomberg data service on Aug. 5, 2010. The Case-Shiller Futures contract is traded on the CME and is settled to the Case-Shiller Index two months after the previous calendar quarter. For example, the February contract will be settled against the spot value of the S&P Case-Shiller Home Price Index values representing the fourth calendar quarter of the previous year, which is released in February one day after the settlement of the contract. Note that most close observers believe that the accuracy of these futures contracts as forecasts diminishes the farther out one looks.
[510] All data normalized to 100 at January 2000. Futures data accessed through Bloomberg data service on August 6, 2010. S&P/Case-Shiller Home Price Indices, *supra* note 505.

FIGURE 34: PERCENT CHANGE IN GDP, CONSTANT PRICES [511]



Foreign investment in the United States was at historically high levels pre-crisis. However, as the risk associated with U.S. subprime assets became known in the summer of 2007, this reversed drastically, with record outflow numbers being reached in Q1 2009.

FIGURE 35: FOREIGN ASSETS IN THE UNITED STATES, NET CAPITAL FLOW [512]



G. Financial Update

Each month, the Panel summarizes the resources that the federal government has committed to economic stabilization. The following financial update provides: (1) an updated accounting of the TARP, including a tally of dividend income, repayments and warrant dispositions that the program has received as of June 30,

[511] International Monetary Fund, *WEO Database: April 2010* (Instrument: Gross Domestic Product, Constant Prices, Percent Change, Frequency: Annual) (online at www.imf.org/external/pubs/ft/weo/2010/01/weodata/index.aspx) (accessed Aug. 10, 2010).

[512] Federal Reserve Bank of St. Louis, *Series BOPIN: Foreign Assets in the U.S.: Net, Capital Inflow (+)* (Instrument: U.S. International Transactions, Frequency: Quarterly) (online at www.research.stlouisfed.org) (accessed Aug. 10, 2010).

2010; and (2) an updated accounting of the full federal resource commitment as of July 28, 2010.

1. The TARP

a. Program Snapshot[513]

As of July 30, 2010, Treasury was committed to spend up to $475 billion of TARP funds through an assortment of programs. Of this amount, $393.8 billion had been spent under the $475 billion[514] ceiling and $203.9 billion in TARP funds have been repaid. There have also been $5.8 billion in losses, leaving $184.1 billion in TARP funds currently outstanding.

During the month of July, Treasury received $377.1 million in full repayments from Fulton Financial Corporation and Green City Bancshares for its CPP investments. To date, a total of 78 institutions have fully repurchased their CPP preferred shares. Of the institutions that have fully repaid, 39 repurchased their warrants for common shares that Treasury received in conjunction with its preferred stock investments. Treasury sold the warrants for common shares for 13 other institutions at auction.

In total, $22.9 billion in income has been earned by the TARP through warrant repurchases, additional notes, dividends and interest paid on investments. For further information on TARP profit and loss, please see Figure 37.

b. Program Updates

Dodd-Frank Wall Street Reform and Consumer Protection Act

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act was signed into law. As part of this legislation, the ceiling on the amount of TARP funds that can be allocated to programs was reduced from $698.7 billion to $475 billion. While a large portion of the savings can be taken from unallocated funds, there were several notable program changes. The Small Business Lending Fund (SBLF), a proposed $30 billion TARP program that was never launched, was eliminated. The Term Asset-Backed Securities Loan Facility (TALF) program was reduced $15.7 billion from the $20 billion committed, leaving $4.3 billion in TARP funds com-

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[513] Treasury Transactions Report, *supra* note 313; U.S. Department of the Treasury, *Cumulative Dividends and Interest Report as of June 30, 2010* (July 15, 2010) (online at financialstability.gov/docs/dividends-interest-reports/June%202010%20Dividends%20and%20Interest%20Report.pdf) (hereinafter "Treasury Cumulative Dividends and Interest Report").

[514] The original $700 billion TARP ceiling was reduced by $1.3 billion as part of the "Helping Families Save Their Homes Act of 2009." The authorized total commitment level was later reduced to $475 billion as part of the Frank-Dodd Financial Reform Bill that was signed into law on July 21, 2010. 12 U.S.C. § 5225(a)–(b); *Helping Families Save Their Homes Act of 2009,* Pub. L. No. 111–22, § 402(f) (reducing by $1.26 billion the authority for the TARP originally set under EESA at $700 billion). On June 30, 2010, the House & Senate Conference Committee agreed to reduce the amount authorized under the TARP from $700 billion to $475 billion as part of the Dodd-Frank Wall Street Reform and Consumer Protection Act. *See* Dodd-Frank Wall Street Reform and Consumer Protection Act, *supra* note 162, at § 1302. On July 21, 2010, President Obama signed the *Dodd-Frank Wall Street Reform and Consumer Protection Act* into law. White House, *Remarks by the President at Signing of Dodd-Frank Wall Street Reform and Consumer Protection Act* (online at www.whitehouse.gov/the-press-office/remarks-president-signing-dodd-frank-wall-street-reform-and-consumer-protection-act).

mitted to the TALF.[515] The ceiling for the Public-Private Investment Program (PPIP) was reduced by $8 billion, leaving $22.4 billion in TARP funds committed to the program. Treasury also reduced the $48.8 billion in TARP funds dedicated to foreclosure mitigation efforts by $3.2 billion. For further detail on TARP reductions, please see Figure 36 below.

TARP Foreclosure Mitigation Efforts

Treasury has reduced its intended total allocation for the foreclosure mitigation programs by only $3.2 billion, from $48.8 billion to $45.6 billion. The revised program total of $45.6 billion is comprised of $11 billion for the FHA Refinance Program, $4.1 billion for the HFA Hardest Hit Fund and $30.6 billion for the remaining Making Home Affordable (MHA) programs.[516]

Citigroup Stock Sale

On July 23, 2010, the Treasury Department authorized Morgan Stanley, as its sales agent, to sell another block of up to 1.5 billion shares of Citigroup stock that Treasury received through its CPP investment in Citigroup. Treasury first sold 1.5 billion shares of Citigroup stock between April 26 and May 26, 2010 at a weighted price of $4.12. During the second sale period, May 26 to June 30, 2010, only 1.1 billion of the 1.5 billion shares authorized for sale were sold at a weighted price of $3.90. A third selling period opened on July 23, 2010. Treasury intends to sell another 1.5 billion shares by September 30, 2010. Thus far, Treasury has earned a 24 percent premium on the Citigroup shares it has sold at market.[517]

c. Income: Dividends, Interest, Repayments, and Warrant Sales

As of July 30, 2010, a total of 78 institutions have completely repurchased their CPP preferred shares. Of these institutions, 39 have repurchased their warrants for common shares that Treasury received in conjunction with its preferred stock investments; Treasury sold the warrants for common shares for 13 other institutions at auction. Bar Harbor Bancshares and Discover Financial Services repurchased their warrants for $250,000 and $172 million, respectively. In addition, Treasury receives dividend payments on the preferred shares that it holds, usually five percent per annum for the first five years and nine percent per annum thereafter.[518] To date, Treasury has received approximately $22.8 billion in net in-

[515] The TARP's commitment to the TALF program has been 1:10 ratio of the Federal Reserve obligation. The Treasury is responsible for reimbursing the Federal Reserve for loan-losses associated with the program. At the time of the TARP program reductions, $43 billion in loans were outstanding under the TALF program. Therefore, as of August 10, 2010 the TARP commitment to the TALF program was $4.3 billion.

[516] The $4.4 billion reduction from the $50 billion previously available to HAMP includes $1.3 billion in funds allocated for the "Helping Families Save Their Homes Act of 2009" (a reduction taken in May 2009 which also reduced the TARP ceiling from $700 billion to $698.7 billion) and $3.1 billion in HAMP taken in July 2010 in conjunction with the Dodd-Frank Wall Street Reform and Consumer Protection Act's imposition of a new $475 billion TARP ceiling.

[517] As of July 30, 2010, 2.6 million shares of Treasury's Citigroup stock have been sold with net proceeds of $2.03 billion as compared to the $8.5 billion cost to Treasury for these shares. Treasury Transactions Report, *supra* note 313.

[518] *See, e.g.,* Securities Purchase Agreement for Public Institutions, *supra* note 306.

come from warrant repurchases, dividends, interest payments and other considerations deriving from TARP investments.[519]

d. TARP Accounting

FIGURE 36: TARP ACCOUNTING (AS OF JULY 30, 2010)

[Dollars in billions] [xi]

Program	Original Program Commitment	Dodd-Frank Program Adjustments	Current Maximum Amount Available	Actual Funding	Total Repayments/ Reduced Exposure	Total Losses	Funding Currently Outstanding	Funding Available
Capital Purchase Program (CPP)	$204.9	$0	$204.9	$204.9	[xii] ($147.3)	[xiii] ($2.3)	$55.3	$0
Targeted Investment Program (TIP)	40.0	0	40.0	40.0	(40.0)	0	0	0
Asset Guarantee Program (AGP)	5.0	0	5.0	5.0	[xiv] (5.0)	0	0	0
AIG Investment Program (AIGIP)	69.8	0	69.8	[xv] 49.1	0	0	49.1	20.7
Auto Industry Financing Program (AIFP)	81.3	0.1	81.4	81.3	(10.8)	[xvi] (3.5)	67	0
Auto Supplier Support Program (ASSP) [xvii]	3.5	(3.1)	0.4	0.4	(0.4)	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	20.0	(15.7)	[xviii] 4.3	[xix] 0.1	0	0	0.1	4.2
Public-Private Investment Program (PPIP) [xx]	30.4	(8.0)	22.4	11.0	[xxi] (0.4)	0	10.6	11.8
Small Business Lending Fund (SBLF)	30.0	[xxii] (30.0)	N/A	N/A	N/A	N/A	N/A	N/A
SBA 7(a) Securities Purchase	1	(0.6)	[xxiii] 0.4	0.23	0	0	0.23	0.17
Home Affordable Modification Program (HAMP)	[xxiv] 46.7	[xxv] (16.2)	30.5	0.25	0	0	0.25	30.25
Hardest Hit Fund (HHF)	2.1	2.0	[xxvi] 4.1	1.5	0	0	1.5	2.6
FHA Refinance Program	0	[xxvii] 11.0	11.0	0	0	0	0	11
Community Development Capital Initiative (CDCI)	0.8	0	[xxviii] 0.8	0.04	0	0	0.04	0.76
Total	[xxix] **535.5**	**($60.5)**	**$475**	**393.82**	**(203.9)**	**(5.8)**	**184.12**	**81.48**

[xi] U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xii] Total amount repaid under CPP includes $8.5 billion Treasury received as part of its sales of Citigroup common stock. As of July 30, 2010, Treasury has sold 2.6 billion Citigroup common shares for $10.5 billion in gross proceeds. In June 2009, Treasury exchanged $25 billion in Citigroup preferred stock for 7.7 billion shares of the company's common stock at $3.25 per share. Therefore, Treasury received $2 billion in net proceeds from the sale of Citigroup common stock. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf). Total CPP repayments also includes amounts repaid by institutions that exchanged their CPP investments for investments under the Community Development Capital Initiative. For more details on the companies who are now participating in the CDCI, *see* footnote xviii.

[519] Treasury Cumulative Dividends and Interest Report, *supra* note 513; Treasury Transactions Report, *supra* note 313. Treasury also received an additional $1.2 billion in participation fees from its Guarantee Program for Money Market Funds.

[xiii] Treasury has classified the investments it made in two institutions, CIT Group ($2.3 billion) and Pacific Coast National Bancorp ($4.1 million), as losses on the Transactions Report. Therefore, Treasury's net current CPP investment is $55.3 billion due to the $2.3 billion in losses thus far. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xiv] Although this $5 billion is no longer exposed as part of the AGP and is accounted for as available, Treasury did not receive a repayment in the same sense as with other investments. Treasury did receive other income as consideration for the guarantee, which is not a repayment and is accounted for in Figure 36.

[xv] AIG has completely utilized the $40 billion made available on November 25, 2008 and drawn down $7.54 billion of the $29.8 billion made available on April 17, 2009. This figure also reflects $1.6 billion in accumulated but unpaid dividends owed by AIG to Treasury due to the restructuring of Treasury's investment from cumulative preferred shares to non-cumulative shares. American International Group, Inc., *Form 10–K for the Fiscal Year Ending December 31, 2009,* at 45 (Feb. 26, 2010) (online at www.sec.gov/Archives/edgar/data/5272/000104746910001465/a2196553z10-k.htm); U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010,* at 20 (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xvi] The $1.9 billion settlement payment represents a $1.6 billion loss on Treasury's Chrysler Holding Investment. This amount is in addition to losses connected to the $1.9 billion loss from the $4.1 billion debtor-in-possession credit facility, or Chrysler DIP Loan. U.S. Department of the Treasury, *Chrysler Financial Parent Company Repays $1.9 Billion in Settlement of Original Chrysler Loan* (May 17, 2010) (online at www.financialstability.gov/latest/pr_05172010c.html).

[xvii] On April 5, 2010 and April 7, 2010, Treasury's commitment to lend to the GM SPV and the Chrysler SPV respectively under the ASSP ended. In total, Treasury received $413 million in repayments from loans provided by this program ($290 million from the GM SPV and $123 million from the Chrysler SPV). Further, Treasury received $101 million in proceeds from additional notes associated with this program. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010,* at 19 (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xviii] The TARP's commitment to the TALF program has been 1:10 ratio of the Federal Reserve obligation. The program was originally intended to be a $200 billion initiative, and the TARP was responsible for the first $20 billion in loan-losses, if any were incurred. The loan is incrementally funded. At the time of the TARP program reductions, $43 billion in loans was outstanding under the TALF program. Therefore, as of July 30, 2010, the TARP commitment to the TALF program was $4.3 billion, representing 10 percent of the total program size. The Federal Reserve Board of Governors agreed that it was appropriate for Treasury to reduce TALF credit protection to $4.3 billion. Board of Governors of the Federal Reserve System, *Federal Reserve announces agreement with the Treasury Department regarding a reduction of credit protection provided for the Term Asset-Backed Securities Loan Facility (TALF)* (July 20, 2010) (online at www.federalreserve.gov/newsevents/press/monetary/20100720a.htm).

[xix] As of July 28, 2010, Treasury provided $105 million to TALF LLC. This total includes accrued payable interest. Federal Reserve Bank of New York, *Factors Affecting Reserve Balances (H.4.1)* (July 29, 2010) (online at www.federalreserve.gov/releases/h41/).

[xx] On July 19, 2010, Treasury released its third quarterly report on the Legacy Securities Public-Private Investment Partnership. As of June 30, 2010, the total value of assets held by the PPIP managers was $16 billion. Of this total, 85 percent was non-agency Residential Mortgage-Backed Securities and the remaining 15 percent was Commercial Mortgage-Backed Securities. U.S. Department of the Treasury, *Legacy Securities Public-Private Investment Program, Program Update—Quarter Ended March 31, 2010* (Apr. 20, 2010) (online at www.financialstability.gov/docs/External%20Report%20-%2003-10%20Final.pdf).

[xxi] As of July 30, 2010, $368 million in capital repayments had been made by PPIP participants. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxii] As part of the TARP commitment reductions detailed by Treasury, the full $30 billion dedicated to the SBLF was eliminated and the program no longer exists under the TARP. Panel staff discussions with Treasury staff.

[xxiii] In July, Treasury made $41 million in additional purchases under the SBA 7(a) Securities Purchase Program. As of July 30, 2010, Treasury's purchases totaled $206 million. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010,* at 19 (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxiv] The original funding amount allotted for the Home Affordable Modification Program (HAMP) was $50 billion. In May 2009, this amount was reduced by $1.3 billion as part of the ''Helping Families Save Their Homes Act of 2009.'' Panel staff discussions with Treasury staff.

[xxv] The overall reduction in HAMP funding reflects $11 billion in funds redirected towards the FHA refinance program, $2 billion in funds that will be used as part of the Hardest Hit Fund (HHF) expansion for unemployed borrowers, $1.3 billion in spending authority that was reallocated as part of the ''Helping Families Save Their Homes Act of 2009,'' (see footnote xiv) and $3.1 billion in general program reductions. Panel staff discussions with Treasury staff.

[xxvi] As part of the Dodd-Frank Wall Street Reform and Consumer Protection Act, an additional $2 billion in TARP funds was committed to mortgage assistance for unemployed borrowers. Panel staff discussions with Treasury staff.

[xxvii] Panel staff discussions with Treasury staff.

[xxviii] On July 30, 2010, Guaranty Capital Corporation and University Financial Corp, Inc. exchanged their subordinated debenture investments from the CPP for an equivalent investment amount under the Community Development Capital Initiative (CDCI). Treasury made an additional $10.2 million investment in University Financial Corp, Inc. as part of the company's exchange. As of July 30, 2010, Treasury's total current investment under the CDCI is $36.1 million. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010,* at 19 (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxix] Last month, the Panel reported that committed funds under TARP were $520.3 billion. Treasury's accounting for ''total planned investments'' as of June 30, 2010 was $536.6 billion. These two totals differ because the Panel's accounting of Treasury commitments for Consumer and Business Lending Initiative programs included $20 billion for TALF, $15 billion for Unlocking SBA Lending, and $780 million for the CDCI. Treasury recorded $20 billion for TALF, $30 billion for the Small Business Lending Fund, and $1 billion each for the CDCI and the SBA 7(a) securities purchase program. U.S. Department of the Treasury, Troubled Assets Relief Program Monthly 105(a) Report—June 2010 (July 12, 2010) (online at financialstability.gov/docs/105CongressionalReports/June%202010%20105(a)%20Report_Final.pdf); Congressional Oversight Panel, *July Oversight Report: Small Banks in the Capital Purchase Program,* at 112 (July 14, 2010) (online at cop.senate.gov/documents/cop-071410-report.pdf).

FIGURE 37: TARP PROFIT AND LOSS

[Dollars in millions]

TARP Initiative	Dividends [xxx] (as of 6/30/10)	Interest [xxi] (as of 6/30/10)	Warrant Repurchases [xxii] (as of 7/30/10)	Other Proceeds (as of 6/30/10)	Losses [xxiii] (as of 7/30/10)	Total
Total	$15,858	$884	$7,214	$4,719	($5,822)	$22,853
CPP	9,428	38	5,943	[xxiv] 2,026	(2,334)	15,101
TIP	3,004	–	1,256	–		4,260
AIFP	[xxv] 3,060	802	15	–	(3,488)	389
ASSP	–	15	–	[xxvi] 101		116
AGP	366	–	0	[xxvii] 2,234		2,600
PPIP	–	29	–	[xxviii] 82		110
Bank of America Guarantee	–	–	–	[xxix] 276		276

[xxx] U.S. Department of the Treasury, *Cumulative Dividends and Interest Report as of June 30, 2010* (July 15, 2010) (online at financialstability.gov/docs/dividends-interest-reports/June%202010%20Dividends%20and%20Interest%20Report.pdf).

[xxxi] *Id.*

[xxxii] U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxxiii] Treasury classified the investments it made in two institutions, CIT Group ($2.3 billion) and Pacific Coast National Bancorp ($4.1 million), as losses on the Transactions Report. A third institution, UCBH Holdings, Inc., received $299 million in TARP funds and is currently in bankruptcy proceedings. Finally, as of May 26, 2010, the banking subsidiary of TARP recipient Midwest Banc Holdings, Inc. ($89.4 million) was in receivership. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxxiv] This figure represents net proceeds to Treasury from the sale of Citigroup common stock to date. The net proceeds account for Treasury's exchange in June 2009 of $25 billion in Citigroup preferred shares for 7.7 billion shares of the company's common stock at $3.25 per share. On May 26, 2010, Treasury completed the sale of 1.5 billion shares of Citigroup common stock at an average weighted price of $4.12 per share. On June 30, 2010, Treasury announced the sale of 1,108,971,857 additional shares of Citigroup stock at an average weighted price of $3.90 per share. Treasury opened a third selling period on July 23, 2010, with plans to sell another 1.5 billion shares by September 30, 2010. As of July 30, 2010, Treasury has received $10.5 billion in gross proceeds from these sales. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxxv] This figure includes $815 million in dividends from GMAC preferred stock, trust preferred securities, and mandatory convertible preferred shares. The dividend total also includes a $748.6 million senior unsecured note from Treasury's investment in General Motors. Information provided by Treasury.

[xxxvi] This represents the total proceeds from additional notes. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxxvii] As a fee for taking a second-loss position up to $5 billion on a $301 billion pool of ring-fenced Citigroup assets as part of the AGP, Treasury received $4.03 billion in Citigroup preferred stock and warrants; Treasury exchanged these preferred stocks for trust preferred securities in June 2009. Following the early termination of the guarantee, Treasury cancelled $1.8 billion of the trust preferred securities, leaving Treasury with a $2.23 billion investment in Citigroup trust preferred securities in exchange for the guarantee. At the end of Citigroup's participation in the FDIC's TLGP, the FDIC may transfer $800 million of $3.02 billion in Citigroup Trust Preferred Securities it received in consideration for its role in the AGP to Treasury. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxxviii] As of June 30, 2010, Treasury has earned $61.1 million in membership interest distributions from the PPIP. Additionally, Treasury has earned $20.6 million in total proceeds following the termination of the TCW fund. U.S. Department of the Treasury, *Cumulative Dividends and Interest Report as of June 30, 2010* (July 15, 2010) (online at financialstability.gov/docs/dividends-interest-reports/June%202010%20Dividends%20and%20Interest%20Report.pdf); U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xxxix] Although Treasury, the Federal Reserve, and the FDIC negotiated with Bank of America regarding a similar guarantee, the parties never reached an agreement. In September 2009, Bank of America agreed to pay each of the prospective guarantors a fee as though the guarantee had been in place during the negotiations period. This agreement resulted in payments of $276 million to Treasury, $57 million to the Federal Reserve, and $92 million to the FDIC. U.S. Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Bank of America Corporation, *Termination Agreement,* at 1–2 (Sept. 21, 2009) (online at www.financialstability.gov/docs/AGP/BofA%20-%20Termination%20Agreement%20-%20executed.pdf).

e. Rate of Return

As of August 4, 2010, the average internal rate of return for all public financial institutions that participated in the CPP and fully repaid the U.S. government (including preferred shares, dividends, and warrants) was 9.9 percent. The internal rate of return is the annualized effective compounded return rate that can be earned on invested capital.

f. Warrant Disposition

FIGURE 38: WARRANT REPURCHASES/AUCTIONS FOR FINANCIAL INSTITUTIONS WHO HAVE FULLY REPAID CPP FUNDS AS OF AUGUST 4, 2010

Institution	Investment Date	Warrant Repurchase Date	Warrant Repurchase/Sale Amount	Panel's Best Valuation Estimate at Repurchase Date	Price/ Estimate Ratio	IRR Percent
Old National Bancorp	12/12/2008	5/8/2009	$1,200,000	$2,150,000	0.558	9.3
Iberiabank Corporation	12/5/2008	5/20/2009	1,200,000	2,010,000	0.597	9.4
Firstmerit Corporation	1/9/2009	5/27/2009	5,025,000	4,260,000	1.180	20.3
Sun Bancorp, Inc	1/9/2009	5/27/2009	2,100,000	5,580,000	0.376	15.3
Independent Bank Corp.	1/9/2009	5/27/2009	2,200,000	3,870,000	0.568	15.6
Alliance Financial Corporation	12/19/2008	6/17/2009	900,000	1,580,000	0.570	13.8
First Niagara Financial Group	11/21/2008	6/24/2009	2,700,000	3,050,000	0.885	8.0
Berkshire Hills Bancorp, Inc.	12/19/2008	6/24/2009	1,040,000	1,620,000	0.642	11.3
Somerset Hills Bancorp	1/16/2009	6/24/2009	275,000	580,000	0.474	16.6
SCBT Financial Corporation	1/16/2009	6/24/2009	1,400,000	2,290,000	0.611	11.7
HF Financial Corp	11/21/2008	6/30/2009	650,000	1,240,000	0.524	10.1
State Street	10/28/2008	7/8/2009	60,000,000	54,200,000	1.107	9.9
U.S. Bancorp ...	11/14/2008	7/15/2009	139,000,000	135,100,000	1.029	8.7
The Goldman Sachs Group, Inc.	10/28/2008	7/22/2009	1,100,000,000	1,128,400,000	0.975	22.8
BB&T Corp.	11/14/2008	7/22/2009	67,010,402	68,200,000	0.983	8.7
American Express Company	1/9/2009	7/29/2009	340,000,000	391,200,000	0.869	29.5
Bank of New York Mellon Corp	10/28/2008	8/5/2009	136,000,000	155,700,000	0.873	12.3
Morgan Stanley	10/28/2008	8/12/2009	950,000,000	1,039,800,000	0.914	20.2
Northern Trust Corporation	11/14/2008	8/26/2009	87,000,000	89,800,000	0.969	14.5
Old Line Bancshares Inc.	12/5/2008	9/2/2009	225,000	500,000	0.450	10.4
Bancorp Rhode Island, Inc.	12/19/2008	9/30/2009	1,400,000	1,400,000	1.000	12.6
Centerstate Banks of Florida Inc.	11/21/2008	10/28/2009	212,000	220,000	0.964	5.9
Manhattan Bancorp	12/5/2008	10/14/2009	63,364	140,000	0.453	9.8
CVB Financial Corp	12/5/2008	10/28/2009	1,307,000	3,522,198	0.371	6.4
Bank of the Ozarks	12/12/2008	11/24/2009	2,650,000	3,500,000	0.757	9.0
Capital One Financial	11/14/2008	12/3/2009	148,731,030	232,000,000	0.641	12.0
JP Morgan Chase & Co.	10/28/2008	12/10/2009	950,318,243	1,006,587,697	0.944	10.9

FIGURE 38: WARRANT REPURCHASES/AUCTIONS FOR FINANCIAL INSTITUTIONS WHO HAVE FULLY REPAID CPP FUNDS AS OF AUGUST 4, 2010—Continued

Institution	Investment Date	Warrant Repurchase Date	Warrant Repurchase/Sale Amount	Panel's Best Valuation Estimate at Repurchase Date	Price/ Estimate Ratio	IRR Percent
TCF Financial Corp	1/16/2009	12/16/2009	9,599,964	11,825,830	0.812	11.0
LSB Corporation	12/12/2008	12/16/2009	560,000	535,202	1.046	9.0
Wainwright Bank & Trust Company	12/19/2008	12/16/2009	568,700	1,071,494	0.531	7.8
Wesbanco Bank, Inc.	12/5/2008	12/23/2009	950,000	2,387,617	0.398	6.7
Union First Market Bankshares Corporation (Union Bankshares Corporation)	12/19/2008	12/23/2009	450,000	1,130,418	0.398	5.8
Trustmark Corporation	11/21/2008	12/30/2009	10,000,000	11,573,699	0.864	9.4
Flushing Financial Corporation	12/19/2008	12/30/2009	900,000	2,861,919	0.314	6.5
OceanFirst Financial Corporation	1/16/2009	2/3/2010	430,797	279,359	1.542	6.2
Monarch Financial Holdings, Inc.	12/19/2008	2/10/2010	260,000	623,434	0.417	6.7
Bank of America	[520] 10/28/2008; [521] 1/9/2009; [522] 1/14/2009	3/3/2010	1,566,210,714	1,006,416,684	1.533	6.5
Washington Federal Inc./ Washington Federal Savings & Loan Association	11/14/2008	3/9/2010	15,623,222	10,166,404	1.537	18.6
Signature Bank	12/12/2008	3/10/2010	11,320,751	11,458,577	0.988	32.4
Texas Capital Bancshares, Inc.	1/16/2009	3/11/2010	6,709,061	8,316,604	0.807	30.1
Umpqua Holdings Corp.	11/14/2008	3/31/2010	4,500,000	5,162,400	0.872	6.6
City National Corporation	11/21/2008	4/7/2010	18,500,000	24,376,448	0.759	8.5
First Litchfield Financial Corporation	12/12/2008	4/7/2010	1,488,046	1,863,158	0.799	15.9
PNC Financial Services Group Inc.	12/31/2008	4/29/2010	324,195,686	346,800,388	0.935	8.7
Comerica Inc	11/14/2008	5/4/2010	183,673,472	276,426,071	0.664	10.8
Valley National Bancorp	11/14/2008	5/18/2010	5,571,592	5,955,884	0.935	8.3
Wells Fargo Bank	10/28/2008	5/20/2010	849,014,998	1,064,247,725	0.798	7.8
First Financial Bancorp	12/23/2008	6/2/2010	3,116,284	3,051,431	1.021	8.2

FIGURE 38: WARRANT REPURCHASES/AUCTIONS FOR FINANCIAL INSTITUTIONS WHO HAVE FULLY REPAID CPP FUNDS AS OF AUGUST 4, 2010—Continued

Institution	Investment Date	Warrant Repurchase Date	Warrant Repurchase/Sale Amount	Panel's Best Valuation Estimate at Repurchase Date	Price/ Estimate Ratio	IRR Percent
Sterling Bancshares, Inc./ Sterling Bank	12/12/2008	6/9/2010	3,007,891	5,287,665	0.569	10.8
SVB Financial Group	12/12/2008	6/16/2010	6,820,000	7,884,633	0.865	7.7
Discover Financial Services	3/13/2009	7/7/2010	172,000,000	166,182,652	1.035	17.1
Bar Harbor Bancshares	1/16/2009	7/28/2010	250,000	518,511	0.482	6.2
Total			**$7,198,328,217**	**$7,314,904,102**	**0.984**	**9.9**

[520] Investment date for Bank of America in CPP.
[521] Investment date for Merrill Lynch in CPP.
[522] Investment date for Bank of America in TIP.

FIGURE 39: VALUATION OF CURRENT HOLDINGS OF WARRANTS AS OF AUGUST 4, 2010

[Dollars in millions]

Stress Test Financial Institutions with Warrants Outstanding	Warrant Valuation		
	Low Estimate	High Estimate	Best Estimate
Citigroup	$18.37	$1,132.91	$121.87
SunTrust Banks, Inc.	18.17	357.33	133.59
Regions Financial Corporation	14.04	227.13	83.66
Fifth Third Bancorp	105.62	404.39	195.68
Hartford Financial Services Group, Inc.	418.43	768.39	514.10
KeyCorp	24.13	178.94	76.01
AIG	303.91	1,873.31	1,093.38
All Other Banks	738.31	1,860.14	1,158.34
Total	**$1,640.98**	**$6,802.54**	**$3,376.62**

2. Federal Financial Stability Efforts

a. Federal Reserve and FDIC Programs

In addition to the direct expenditures Treasury has undertaken through the TARP, the federal government has engaged in a much broader program directed at stabilizing the U.S. financial system. Many of these initiatives explicitly augment funds allocated by Treasury under specific TARP initiatives, such as FDIC and Federal Reserve asset guarantees for Citigroup, or operate in tandem with Treasury programs, such as the interaction between PPIP and TALF. Other programs, like the Federal Reserve's extension of credit through its Section 13(3) facilities and SPVs and the FDIC's Temporary Liquidity Guarantee Program, operate independently of the TARP.

b. Total Financial Stability Resources

Beginning in its April 2009 report, the Panel broadly classified the resources that the federal government has devoted to stabilizing the economy through myriad new programs and initiatives as outlays, loans, or guarantees. With the reductions in funding for

certain TARP programs, the Panel calculates the total value of these resources to be over $2.6 trillion. However, this would translate into the ultimate "cost" of the stabilization effort only if: (1) assets do not appreciate; (2) no dividends are received, no warrants are exercised, and no TARP funds are repaid; (3) all loans default and are written off; and (4) all guarantees are exercised and subsequently written off.

With respect to the FDIC and Federal Reserve programs, the risk of loss varies significantly across the programs considered here, as do the mechanisms providing protection for the taxpayer against such risk. As discussed in the Panel's November report, the FDIC assesses a premium of up to 100 basis points on TLGP debt guarantees.[523] In contrast, the Federal Reserve's liquidity programs are generally available only to borrowers with good credit, and the loans are over-collateralized and with recourse to other assets of the borrower. If the assets securing a Federal Reserve loan realize a decline in value greater than the "haircut," the Federal Reserve is able to demand more collateral from the borrower. Similarly, should a borrower default on a recourse loan, the Federal Reserve can turn to the borrower's other assets to make the Federal Reserve whole. In this way, the risk to the taxpayer on recourse loans only materializes if the borrower enters bankruptcy. The only loan currently "underwater"—where the outstanding principal loan amount exceeds the current market value of the collateral—is the loan to Maiden Lane LLC, which was formed to purchase certain Bear Stearns assets.

FIGURE 40: FEDERAL GOVERNMENT FINANCIAL STABILITY EFFORT (AS OF JULY 28, 2010) [i]

[Dollars in billions]

Program	Treasury (TARP)	Federal Reserve	FDIC	Total
Total	**$475**	**$1,475.7**	**$702.9**	**$2,653.6**
Outlays [xli]	237.6	1,302.6	188.4	1,728.6
Loans	24.2	173.1	0	197.2
Guarantees [xlii]	4.3	0	514.5	518.8
Repaid and Unavailable TARP Funds	208.9	0	0	208.9
AIG [xliii]	**69.8**	**89.3**	**0**	**159.1**
Outlays	[xliv] 69.8	[xlv] 25.7	0	95.5
Loans	0	[xlvi] 63.6	0	63.6
Guarantees	0	0	0	0
Citigroup	**25**	**0**	**0**	**25**
Outlays	[xlvii] 25	0	0	25
Loans	0	0	0	0
Guarantees	0	0	0	0
Capital Purchase Program (Other)	**30.3**	**0**	**0**	**30.3**
Outlays	[xlviii] 30.3	0	0	30.3
Loans	0	0	0	0
Guarantees	0	0	0	0
Capital Assistance Program	**N/A**	**0**	**0**	[xlix] **N/A**
TALF	**4.3**	**38.7**	**0**	**43**
Outlays	0	0	0	0
Loans	0	[li] 38.7	0	38.7
Guarantees	[l] 4.3	0	0	4.3
PPIP (Loans) [lii]	**0**	**0**	**0**	**0**
Outlays	0	0	0	0
Loans	0	0	0	0
Guarantees	0	0	0	0

[523] November Oversight Report, *supra* note 68, at 36.

FIGURE 40: FEDERAL GOVERNMENT FINANCIAL STABILITY EFFORT (AS OF JULY 28, 2010) [i]—Continued

[Dollars in billions]

Program	Treasury (TARP)	Federal Reserve	FDIC	Total
PPIP (Securities)	[liii] **22.4**	**0**	**0**	**22.4**
Outlays	7.5	0	0	7.5
Loans	14.9	0	0	14.9
Guarantees	0	0	0	0
Making Home Affordable Program/Foreclosure Mitigation	**45.6**	**0**	**0**	**45.6**
Outlays	[liv] 45.6	0	0	45.6
Loans	0	0	0	0
Guarantees	0	0	0	0
Automotive Industry Financing Program	[lv] **67.1**	**0**	**0**	**67.1**
Outlays	59.0	0	0	59.0
Loans	8/1	0	0	8.1
Guarantees	0	0	0	0
Auto Supplier Support Program	**0.4**	**0**	**0**	**0.4**
Outlays	0	0	0	0
Loans	[lvi] 0.4	0	0	0.4
Guarantees	0	0	0	0
SBA 7(a) Securities Purchase	[lvii] **0.4**	**0**	**0**	**0.4**
Outlays	0.4	0	0	0.4
Loans	0	0	0	0
Guarantees	0	0	0	0
Community Development Capital Initiative	[lviii] **0.78**	**0**	**0**	**0.78**
Outlays	0	0	0	0
Loans	0.78	0	0	0.78
Guarantees	0	0	0	0
Temporary Liquidity Guarantee Program	**0**	**0**	**514.5**	**514.5**
Outlays	0	0	0	0
Loans	0	0	0	0
Guarantees	0	0	[lix] 514.5	514.5
Deposit Insurance Fund	**0**	**0**	**188.4**	**188.4**
Outlays	0	0	[lx] 188.4	188.4
Loans	0	0	0	0
Guarantees	0	0	0	0
Other Federal Reserve Credit Expansion	**0**	**1,347.7**	**0**	**1,347.7**
Outlays	0	[lxi] 1,276.9	0	1,276.9
Loans	0	[lxii] 70.8	0	70.8
Guarantees	0	0	0	0
Repaid TARP Funds	[lxiii] **208.9**	**0**	**0**	**208.9**

[xl] All data in this figure is as of July 28, 2010, except for information regarding the FDIC's Temporary Liquidity Guarantee Program (TLGP). That data is as of June 30, 2010.

[xli] The term ''outlays'' is used here to describe the use of Treasury funds under the TARP, which are broadly classifiable as purchases of debt or equity securities (e.g., debentures, preferred stock, exercised warrants, etc.). These values were calculated using (1) Treasury's actual reported expenditures, and (2) Treasury's anticipated funding levels as estimated by a variety of sources, including Treasury statements and GAO estimates. Anticipated funding levels are set at Treasury's discretion, have changed from initial announcements, and are subject to further change. Outlays used here represent investment and asset purchases—as well as commitments to make investments and asset purchases—and are not the same as budget outlays, which under section 123 of EESA are recorded on a ''credit reform'' basis.

[xlii] Although many of the guarantees may never be exercised or exercised only partially, the guarantee figures included here represent the federal government's greatest possible financial exposure.

[xliii] AIG received an $85 billion credit facility from the Federal Reserve Bank of New York (FRBNY) (reduced to $60 billion in November 2008, to $35 billion in December 2009, and then to $34 billion in May 2010). A Treasury trust received Series C preferred convertible stock in exchange for the facility and $0.5 million. The Series C shares amount to 79.9 percent ownership of common stock, minus the percentage common shares acquired through warrants. In November 2008, Treasury received a warrant to purchase shares amounting to 2 percent ownership of AIG common stock in connection with its Series D stock purchase (exchanged for Series E noncumulative preferred shares on 4/17/2009). Treasury also received a warrant to purchase 3,000 Series F common shares in May 2009. Warrants for Series D and Series F shares represent 2 percent equity ownership, and would convert Series C shares into 77.9 percent of common stock. However, in May 2009, AIG carried out a 20:1 reverse stock split, which allows warrants held by Treasury to become convertible into 0.1 percent common equity. Therefore, the total benefit to the Treasury would be a 79.8 percent voting majority in AIG in connection with its ownership of Series C convertible shares. U.S. Government Accountability Office, *Troubled Asset Relief Program: Status of Government Assistance Provided to AIG* (Sept. 2009) (GAO–09–975) (online at www.gao.gov/new.items/d09975.pdf). Additional information was also provided by Treasury in response to Panel inquiry.

[xliv] This number includes investments under the AIGIP/SSFI Program: a $40 billion investment made on November 25, 2008, and a $30 billion investment made on April 17, 2009 (less a reduction of $165 million representing bonuses paid to AIG Financial Products employees). As of July 12, 2010, AIG had utilized $47.5 billion of the available $69.8 billion under the AIGIP/SSFI. U.S. Department of the Treasury, *Troubled Assets Relief Program Monthly 105(a) Report—June 2010* (July 12, 2010) (online at www.financialstability.gov/docs/105CongressionalReports/June%202010%20105(a)%20Report_Final.pdf).

[xlv] As part of the restructuring of the U.S. government's investment in AIG announced on March 2, 2009, the amount available to AIG through the Revolving Credit Facility was reduced by $25 billion in exchange for preferred equity interests in two special purpose vehicles, AIA Aurora LLC and ALICO Holdings LLC. These SPVs were established to hold the common stock of two AIG subsidiaries: American International Assurance Company Ltd. (AIA) and American Life Insurance Company (ALICO). As of July 28, 2010, the book value of the Federal Reserve Bank of New York's holdings in AIA Aurora LLC and ALICO Holdings LLC was $16.5 billion and $9.3 billion in preferred equity, respectively. Hence, the book value of these securities is $25.7 billion, which is reflected in the corresponding table. Federal Reserve Bank of New York, *Factors Affecting Reserve Balances (H.4.1)* (July 29, 2010) (online at www.federalreserve.gov/releases/h41/).

[xlvi] This number represents the full $34 billion that is available to AIG through its revolving credit facility with the FRBNY ($25.1 billion had been drawn down as of July 28, 2010) and the outstanding principal of the loans extended to the Maiden Lane II and III SPVs to buy AIG assets (as of July 28, 2010, $14.1 billion and $15.5 billion, respectively). The amounts outstanding under the ML2 and ML3 facilities do not reflect the accrued interest payable to FRBNY. Income from the purchased assets is used to pay down the loans to the SPVs, reducing the taxpayers' exposure to losses over time. Federal Reserve Bank of New York, *Factors Affecting Reserve Balances (H.4.1)* (July 29, 2010) (online at www.federalreserve.gov/releases/h41/); Board of Governors of the Federal Reserve System, *Federal Reserve System Monthly Report on Credit and Liquidity Programs and the Balance Sheet,* at 17 (Oct. 2009) (online at www.federalreserve.gov/monetarypolicy/files/monthlyclbsreport200910.pdf). On December 1, 2009, AIG entered into an agreement with FRBNY to reduce the debt AIG owes FRBNY by $25 billion. In exchange, FRBNY received preferred equity interests in two AIG subsidiaries. This also reduced the debt ceiling on the loan facility from $60 billion to $35 billion. American International Group, Inc., *AIG Closes Two Transactions That Reduce Debt AIG Owes Federal Reserve Bank of New York by $25 billion* (Dec. 1, 2009) (online at phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9MjE4ODI8Q2hpbGRJRD0tMXxUeXBlPTM=&t=1). The maximum available amount from the credit facility was reduced from $34.1 billion to $34 billion on May 6, 2010, as a result of the sale of HighStar Port Partners, L.P. Board of Governors of the Federal Reserve System, *Federal Reserve System Monthly Report on Credit and Liquidity Programs and the Balance Sheet,* at 17 (May 2010) (online at www.federalreserve.gov/monetarypolicy/files/monthlyclbsreport201005.pdf).

[xlvii] Treasury is currently in the process of selling its 7.7 billion shares of Citigroup common shares. *See* Endnote xxiv, *supra* (discussing the details of the sales of Citigroup common stock to date). U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xlviii] This figure represents the $204.9 billion Treasury disbursed under the CPP, minus the $25 billion investment in Citigroup identified above, $147.3 billion in repayments that are in ''repaid and unavailable'' TARP funds, and losses under the program. This figure does not account for future repayments of CPP investments and dividend payments from CPP investments. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[xlix] On November 9, 2009, Treasury announced the closing of the CAP and that only one institution, GMAC, was in need of further capital from Treasury. GMAC, however, received further funding through the AIFP. Therefore, the Panel considers CAP unused and closed. U.S. Department of the Treasury, *Treasury Announcement Regarding the Capital Assistance Program* (Nov. 9, 2009) (online at www.financialstability.gov/latest/tg_11092009.html).

[l] This figure represents the $4.3 billion adjusted allocation to the TALF SPV. However, as of July 28, 2010, TALF LLC had drawn only $105 million of the available $4.3 billion. Board of Governors of the Federal Reserve System, *Factors Affecting Reserve Balances (H.4.1)* (July 29, 2010) (online at www.federalreserve.gov/releases/h41/); U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for the Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf). On June 30, 2010, the Federal Reserve ceased issuing loans collateralized by newly issued CMBS. As of this date, investors had requested a total of $73.3 billion in TALF loans ($13.2 billion in CMBS and $60.1 billion in non-CMBS) and $71 billion in TALF loans had been settled ($12 billion in CMBS and $59 billion in non-CMBS). Earlier, it ended its issues of loans collateralized by other TALF-eligible newly issued and legacy ABS on March 31, 2010. Federal Reserve Bank of New York, *Term Asset-Backed Securities Loan Facility: Terms and Conditions* (online at www.newyorkfed.org/markets/talf_terms.html) (accessed Aug. 10, 2010); *Term Asset-Backed Securities Loan Facility: CMBS* (online at www.newyorkfed.org/markets/cmbs_operations.html) (accessed Aug. 10, 2010); Federal Reserve Bank of New York, *Term Asset-Backed Securities Loan Facility: non-CMBS* (online at www.newyorkfed.org/markets/talf_operations.html) (accessed Aug. 10, 2010).

[li] This number is derived from the unofficial 1:10 ratio of the value of Treasury loan guarantees to the value of Federal Reserve loans under the TALF. U.S. Department of the Treasury, *Fact Sheet: Financial Stability Plan* (Feb. 10, 2009) (online at www.financialstability.gov/docs/fact-sheet.pdf) (describing the initial $20 billion Treasury contribution tied to $200 billion in Federal Reserve loans and announcing potential expansion to a $100 billion Treasury contribution tied to $1 trillion in Federal Reserve loans). Since there was only $43 billion in TALF loans outstanding when the program closed, Treasury is currently responsible for reimbursing the Federal Reserve Board up to $4.3 billion in losses from these loans. Thus, the Federal Reserve's maximum potential exposure under the TALF is $38.7 billion.

[lii] It is unlikely that resources will be expended under the PPIP Legacy Loans Program in its original design as a joint Treasury-FDIC program to purchase troubled assets from solvent banks. *See also* Federal Deposit Insurance Corporation, *FDIC Statement on the Status of the Legacy Loans Program* (June 3, 2009) (online at www.fdic.gov/news/news/press/2009/pr09084.html); Federal Deposit Insurance Corporation, *Legacy Loans Program—Test of Funding Mechanism* (July 31, 2009) (online at www.fdic.gov/news/news/press/2009/pr09131.html). The sales described in these statements do not involve any Treasury participation, and FDIC activity is accounted for here as a component of the FDIC's Deposit Insurance Fund outlays.

[liii] This figure represents Treasury's final adjusted investment amount in PPIP. As of July 30, 2010, Treasury reported commitments of $14.9 billion in loans and $7.5 billion in membership interest associated with PPIP. On January 4, 2010, Treasury and one of the nine fund managers, TCW Senior Management Securities Fund, L.P. (TCW), entered into a ''Winding-Up and Liquidation Agreement.'' Treasury's final investment amount in TCW totaled $356 million. Following the liquidation of the fund, Treasury's initial $3.33 billion obligation to TCW was reallocated among the eight remaining funds on March 22, 2010. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[liv] Of the $30.5 billion in TARP funding for HAMP, $28.8 billion has been allocated as of July 30, 2010. However, as of June 30, 2010, only $247.5 million in non-GSE payments have been disbursed under HAMP. *See* Endnotes xiv and xv, *supra* (discussing the details of adjustments to TARP funding for HAMP). Disbursement information provided by Treasury staff in response to a Panel inquiry; U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[lv] A substantial portion of the total $81.3 billion in loans extended under the AIFP have since been converted to common equity and preferred shares in restructured companies. $8.1 billion has been retained as first lien debt (with $1 billion committed to old GM and $7.1 billion to Chrysler). This figure ($67.1 billion) represents Treasury's current obligation under the AIFP after repayments and losses. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[lvi] This figure represents Treasury's total adjusted investment amount in the ASSP. U.S. Department of the Treasury, *Troubled Asset Relief Program Transactions Report for Period Ending July 30, 2010* (Aug. 3, 2010) (online at www.financialstability.gov/docs/transaction-reports/8-3-10%20Transactions%20Report%20as%20of%207-30-10.pdf).

[lvii] Treasury conversations with Panel staff (July 21, 2010).

[lviii] This information was provided by Treasury staff in response to a Panel inquiry.

[lix] This figure represents the current maximum aggregate debt guarantees that could be made under the program, which is a function of the number and size of individual financial institutions participating. $304.1 billion of debt subject to the guarantee is currently outstanding, which represents approximately 59.1 percent of the current cap. Federal Deposit Insurance Corporation, *Monthly Reports on Debt Issuance Under the Temporary Liquidity Guarantee Program: Debt Issuance Under Guarantee Program* (June 30, 2010) (online at www.fdic.gov/regulations/resources/tlgp/total_issuance06-10.html). The FDIC has collected $10.4 billion in fees and surcharges from this program since its inception in the fourth quarter of 2008. Federal Deposit Insurance Corporation, *Monthly Reports Related to the Temporary Liquidity Guarantee Program: Fees Under TLGP Debt Program* (June 30, 2010) (online at www.fdic.gov/regulations/resources/tlgp/fees.html).

[lx] This figure represents the FDIC's provision for losses to its deposit insurance fund attributable to bank failures in the third and fourth quarters of 2008, the first, second, third, and fourth quarters of 2009, and the first quarter of 2010. Federal Deposit Insurance Corporation, *Chief Financial Officer's (CFO) Report to the Board: DIF Income Statement (Fourth Quarter 2008)* (online at www.fdic.gov/about/strategic/corporate/cfo_report_4qtr_08/income.html); Federal Deposit Insurance Corporation, *Chief Financial Officer's (CFO) Report to the Board: DIF Income Statement (Third Quarter 2008)* (online at www.fdic.gov/about/strategic/corporate/cfo_report_3rdqtr_08/income.html); Federal Deposit Insurance Corporation, *Chief Financial Officer's (CFO) Report to the Board: DIF Income Statement (First Quarter 2009)* (online at www.fdic.gov/about/strategic/corporate/cfo_report_1stqtr_09/income.html); Federal Deposit Insurance Corporation, *Chief Financial Officer's (CFO) Report to the Board: DIF Income Statement (Second Quarter 2009)* (online at www.fdic.gov/about/strategic/corporate/cfo_report_2ndqtr_09/income.html); Federal Deposit Insurance Corporation, *Chief Financial Officer's (CFO) Report to the Board: DIF Income Statement (Third Quarter 2009)* (online at www.fdic.gov/about/strategic/corporate/cfo_report_3rdqtr_09/income.html); Federal Deposit Insurance Corporation, *Chief Financial Officer's (CFO) Report to the Board: DIF Income Statement (Fourth Quarter 2009)* (online at www.fdic.gov/about/strategic/corporate/cfo_report_4thqtr_09/income.html); Federal Deposit Insurance Corporation, *Chief Financial Officer's (CFO) Report to the Board: DIF Income Statement (First Quarter 2010)* (online at www.fdic.gov/about/strategic/corporate/cfo_report_1stqtr_10/income.html);. This figure includes the FDIC's estimates of its future losses under loss-sharing agreements that it has entered into with banks acquiring assets of insolvent banks during these seven quarters. Under a loss-sharing agreement, as a condition of an acquiring bank's agreement to purchase the assets of an insolvent bank, the FDIC typically agrees to cover 80 percent of an acquiring bank's future losses on an initial portion of these assets and 95 percent of losses of another portion of assets. *See, e.g.,* Federal Deposit Insurance Corporation, *Purchase and Assumption Agreement—Whole Bank, All Deposits—Among FDIC, Receiver of Guaranty Bank, Austin, Texas, Federal Deposit Insurance Corporation and Compass Bank,* at 65–66 (Aug. 21, 2009) (online at www.fdic.gov/bank/individual/failed/guaranty-tx_p_and_a_w_addendum.pdf). In information provided to Panel staff, the FDIC disclosed that there were approximately $132 billion in assets covered under loss-sharing agreements as of December 18, 2009. Furthermore, the FDIC estimates the total cost of a payout under these agreements to be $59.3 billion. Since there is a published loss estimate for these agreements, the Panel continues to reflect them as outlays rather than as guarantees.

[lxi] Outlays are comprised of the Federal Reserve Mortgage Related Facilities. The Federal Reserve balance sheet accounts for these facilities under Federal agency debt securities and mortgage-backed securities held by the Federal Reserve. Board of Governors of the Federal Reserve System, *Factors Affecting Reserve Balances (H.4.1)* (online at www.federalreserve.gov/releases/h41/) (accessed Aug. 3, 2010). Although the Federal Reserve does not employ the outlays, loans, and guarantees classification, its accounting clearly separates its mortgage-related purchasing programs from its liquidity programs. *See* Board of Governors of the Federal Reserve, *Credit and Liquidity Programs and the Balance Sheet,* at 2 (Nov. 2009) (online at www.federalreserve.gov/monetarypolicy/files/monthlyclbsreport200911.pdf).

On September 7, 2008, Treasury announced the GSE Mortgage Backed Securities Purchase Program (Treasury MBS Purchase Program). The Housing and Economic Recovery Act of 2008 provided Treasury the authority to purchase Government Sponsored Enterprise (GSE) MBS. Under this program, Treasury purchased approximately $214.4 billion in GSE MBS before the program ended on December 31, 2009. As of June 2010, there was $170.5 billion still outstanding under this program. U.S. Department of the Treasury, *MBS Purchase Program: Portfolio by Month* (online at www.financialstability.gov/docs/June%202010%20Portfolio%20by%20month.pdf) (accessed Aug. 3, 2010). Treasury has received $50.1 billion in principal repayments and $11.8 billion in interest payments from these securities. U.S. Department of the Treasury, *MBS Purchase Program Principal and Interest Received* (online at www.financialstability.gov/docs/June%202010%20MBS%20Principal%20and%20Interest%20Monthly%20Breakout.pdf) (accessed August 3, 2010).

[lxii] Federal Reserve Liquidity Facilities classified in this table as loans include primary credit, secondary credit, central bank liquidity swaps, primary dealer and other broker-dealer credit, Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, net portfolio holdings of Commercial Paper Funding Facility LLC, seasonal credit, term auction credit, and the Term Asset-Backed Securities Loan Facility. Board of Governors of the Federal Reserve System, *Factors Affecting Reserve Balances (H.4.1)* (July 29, 2010) (online at www.federalreserve.gov/releases/h41/).

[lxiii] Pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act, TARP resources cannot be allocated to programs that were not established prior to June 25, 2010. Also, any TARP funds that have been repaid may not be used to fund additional TARP commitments. *Dodd-Frank Wall Street Reform and Consumer Protection Act,* Pub. L. No. 111–203, at § 1302 (2010).

SECTION THREE: OVERSIGHT ACTIVITIES

The Congressional Oversight Panel was established as part of the Emergency Economic Stabilization Act (EESA) and formed on November 26, 2008. Since then, the Panel has produced 21 oversight reports, as well as a special report on regulatory reform, issued on January 29, 2009, and a special report on farm credit, issued on July 21, 2009. No hearings have been held since the release of the Panel's July 2010 report.

Upcoming Reports and Hearings

The Panel will release its next oversight report in September. With the Dodd-Frank financial regulatory overhaul signed into law in late July, Treasury's authority to commit new funds or to establish new programs under the TARP has expired. To accompany this official "end" of the TARP, the Panel's September report will provide a summary view of the TARP's accomplishments, and shortcomings, since its inception in October 2008, and discuss Treasury's plan for the program in the coming months and years. The Panel's last report to take a broad view of the TARP as a whole was published in December 2009.

SECTION FOUR: ABOUT THE CONGRESSIONAL OVERSIGHT PANEL

In response to the escalating financial crisis, on October 3, 2008, Congress provided Treasury with the authority to spend $700 billion to stabilize the U.S. economy, preserve home ownership, and promote economic growth. Congress created the Office of Financial Stability (OFS) within Treasury to implement the TARP. At the same time, Congress created the Congressional Oversight Panel to "review the current state of financial markets and the regulatory system." The Panel is empowered to hold hearings, review official data, and write reports on actions taken by Treasury and financial institutions and their effect on the economy. Through regular reports, the Panel must oversee Treasury's actions, assess the impact of spending to stabilize the economy, evaluate market transparency, ensure effective foreclosure mitigation efforts, and guarantee that Treasury's actions are in the best interests of the American people. In addition, Congress instructed the Panel to produce a special report on regulatory reform that analyzes "the current state of the regulatory system and its effectiveness at overseeing the participants in the financial system and protecting consumers." The Panel issued this report in January 2009. Congress subsequently expanded the Panel's mandate by directing it to produce a special report on the availability of credit in the agricultural sector. The report was issued on July 21, 2009.

On November 14, 2008, Senate Majority Leader Harry Reid and the Speaker of the House Nancy Pelosi appointed Richard H. Neiman, Superintendent of Banks for the State of New York, Damon Silvers, Director of Policy and Special Counsel of the American Federation of Labor and Congress of Industrial Organizations (AFL–CIO), and Elizabeth Warren, Leo Gottlieb Professor of Law at Harvard Law School, to the Panel. With the appointment on November 19, 2008, of Congressman Jeb Hensarling to the Panel by House Minority Leader John Boehner, the Panel had a quorum and met for the first time on November 26, 2008, electing Professor Warren as its chair. On December 16, 2008, Senate Minority Leader Mitch McConnell named Senator John E. Sununu to the Panel. Effective August 10, 2009, Senator Sununu resigned from the Panel, and on August 20, 2009, Senator McConnell announced the appointment of Paul Atkins, former Commissioner of the U.S. Securities and Exchange Commission, to fill the vacant seat. Effective December 9, 2009, Congressman Jeb Hensarling resigned from the Panel and House Minority Leader John Boehner announced the appointment of J. Mark McWatters to fill the vacant seat. Senate Minority Leader Mitch McConnell appointed Kenneth Troske, Sturgill Professor of Economics at the University of Kentucky, to fill the vacancy created by the resignation of Paul Atkins on May 21, 2010.