Group of Twenty

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Updated Stocktaking of the G-20 Responses to the Global Crisis: A Review of Publicly Announced Programs for the Banking System

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Executive Summary [1]

Ten months after the collapse of Lehman Brothers, the G-20 governments continue to establish and revise programs designed to address the fragility of banking systems in their countries. Since October, more than half of the G-20 governments have responded to the financial crisis by taking a series of publicly announced actions, aimed at the dual objectives of restoring creditor confidence, and restructuring the banking system.

Markets have stabilized, but a return to normal levels of credit intermediation will be slow. Banks are preserving liquidity and building capital while credit demand has fallen, reflecting the global slowdown. Stabilization policies have been successful, partially removing the urgency of continued policy adjustment. Any complacency or uneven progress in implementing reforms, however, could undermine progress made to date. Unless there is a sustained and comprehensive implementation of crisis-management policies, financial systems and the pace of global credit expansion may be slow to recover.

Crisis-containment policies were publicly announced and largely successful, but there have been relatively limited public announcements among the G-20 concerning bank restructuring and asset management. Many countries may not need broad-based and public programs. Their existing frameworks may be robust or conditions in their financial system may not merit announcement of special policies. Private confidence and policy coordination, however, could be enhanced by the announcement of policy intentions.

- Formal policy cooperation remains at an early stage. Such cooperation has largely been through low-key and existing channels, which has had only a limited impact on public perceptions of the consistency of reform programs across countries. Progress in the coordination of policy responses has also been limited.

- Just over half of the G-20 countries have announced strategies for restructuring or recapitalization.

- Several countries have announced their intention to conduct stress tests of their banking system. By June 2009, only two countries had completed stress tests and five countries had announced their intention to proceed with such evaluation. No countries had publicly announced that they had undertaken a more comprehensive and full diagnosis of their banking system.

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[1] This note was prepared by David S. Hoelscher, Suchitra Kumarapathy, Nancy Rawlings, and Andre Santos (all Monetary and Capital Markets Division).

- Forty percent of the countries have announced asset-management programs, the purpose of which vary; however, only half address distressed bank assets and only two of these are underway.[2]

While global markets have stabilized and there are early signs of recovery, critical measures remain to be taken. Such measures include:

- developing mechanisms for coordination of polices, particularly for the disengagement from temporary creditor- protection policies;

- completing a full diagnosis of the banking system, in particular in light of the potential increase in NPLs over the coming months;

- combining stress testing policies with complementary policies needed to address those banks identified as potentially weak; and

- adopting asset management policies that are sufficient to neutralize the impact of growing NPLs.

[2] The United Kingdom's Asset Protection Scheme has been established. Germany just recently announced their "bad bank" program. Korea's plan, using Korea Asset Management Company, has not been utilized to date and the United States Public and Private Investment Fund has been revised and is moving forward, but no transactions have occurred to date. The details of Spain's recently approved program (under the Orderly Bank Restructuring Plan) have yet to be announced.

I. INTRODUCTION

The current crisis is considerably deeper and wider than previous post-war crises. Its scope demonstrates the extent of both unexpected weaknesses that had built up in financial systems and the interconnectedness of the global financial system. The immediate government response stabilized both financial institutions and private expectations. By early 2009, the crisis had been contained and governments turned to restoring financial sector soundness.

This paper assesses progress made in implementing publicly announced crisis-management policies. The paper focuses narrowly on policies to contain the crisis and subsequent policies aimed at addressing weaknesses in the banking system. It is too early to evaluate either the medium-term impact or the effectiveness of these policy responses. This paper, therefore, focuses narrowly on the pace of implementation of publicly announced policy packages by the G-20 countries through the first six months of 2009. This focus on announced packages, while forming only an incomplete evaluation, has at least two benefits. First, public announcement facilitates easier cooperation across borders. Second, public announcements guide private-sector expectations about the authorities' diagnosis of the course of the crisis and their program for addressing the crisis. In this way, announcements can be a useful tool in crisis management.

The paper has several limitations. First, the impact of the global crisis has not been uniform. Some countries relied on existing institutional frameworks to manage the crisis, making few, if any, special policy announcements. Their approach reflects a variety of factors including (i) differences in the extent of shocks to the national economy; (ii) differences in initial conditions of the financial system; and (iii) national preferences. The focus in the paper on publicly announced programs, therefore, may understate progress made in meeting key objectives. Second, this paper does not review the full range of policy measures, such as the provision of market liquidity or government support to nonbank financial institutions.

II. OVERALL ASSESSMENT

A. Principles of Crisis Management

Experience from past crises offers some principles for the evaluation of responses to the global crisis. Policy measures can be classified in terms of the objectives they seek to achieve.[3] In a systemic crisis, such measures have three interrelated objectives:

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[3] For more detail, see David S. Hoelscher and Marc Quintyn, Managing Systemic Crises, IMF Occasional Paper 224, 2003; and SM/09/23, "An Overview of the Legal, Institutional, and Regulatory Framework for Bank Insolvency."

- **Containment**: Runs on banks by both depositors and other creditors must be halted, as adjustment policies cannot be implemented when creditor confidence has collapsed.

- **Restructuring and resolution**: Rebuilding the banking system, including the recapitalization and operational restructuring, requires loss identification, a diagnosis of banks' viability, the operational restructuring of weak but viable banks, and the resolution of nonviable banks.

- **Asset management**: Management of distressed assets can begin once the financial position of the banks is established. This may occur at the firm level or through a centralized asset-management function.

The specifics of policy packages will vary. Policies must reflect the institutional, legal, and regulatory environment of each country and the magnitude of the problem. Effective policy packages must be designed to achieve all three objectives.

B. Overview of Developments since September 2008

Countries implemented a wide range of crisis-management policies, although the priorities evolved over the course of the crisis. Critical actions included the establishment of creditor protection programs and the injection of capital in banks (Table 1). Additional actions included an evaluation of condition of the financial system and measures to address the deteriorating assets of the banks. The objective of policy measures evolved over the course of the crisis from an early emphasis on containment to subsequent restructuring and asset management (Figure 1).

Containment of the crisis was the immediate priority, aimed at preventing the collapse of creditor confidence. In a number of countries, depositor protection was increased, largely through increases in deposit insurance coverage, and debt issuances of financial institutions were guaranteed. These measures stabilized creditors' concerns in late 2008. Over half (12 countries) of the G-20 countries responded with some forms of containment measures, including both announcing enhanced depositor protection plans and debt guarantee programs.

The immediate crisis response also included aggressive bank recapitalization. The most significant public capital injections occurred immediately after the collapse of Lehman Brothers, with governments injecting the equivalent of approximately US$384 billion between the beginning of September 2008 and end-February 2009. Recapitalization efforts continued, albeit at a slower pace, through June 2009, with countries injecting an additional US$75 billion between the beginning of March and end-June 2009 (Table 3).

Table 1. Overview of Policy Measures for Banks—G-20 Countries

As of June 30, 2009

	Containment					Resolution				
	Deposit Insurance		Debt Guarantees		Liquidity	Recapitalization			Asset Management Strategies	
	No Change	Establish, Increase or Expand	Wholesale borrowing	Amount Committed (bn of US$)	Strengthened Measures	Capital Plans Established	Capital Committed (bn of US$)	Capital Injected (bn of US$)	Asset Purchase Plans or Guarantees	Amount Committed (bn of US$)
Argentina	√				√					
Australia		√	√	unannounced	√				√ 16/	3
Brazil	√				√					
Canada	√ 19/		√ 14/	unannounced	√				√ 20/	115
China	√				√	1/	19	19		
France	√		√	425		√	53	33		
Germany		√	√	531		√ 11/	106	53	√ 10/	0
India	√				√					
Indonesia		√			√					
Italy	√ /3		√	unannounced		√ 4/	16			
Japan	√				√	√ 5/	124	1	√ 21/	217
Korea		√	√	unannounced	√	√	15	3	√ 13/	30
Mexico	√		√	unannounced	√					
Netherlands		√	√	266		√ 18/	30	28	√ 24/	32
Russia		√	√	unannounced	√	√ 25/	31	17		
Saudi Arabia	√ 22/				√					
South Africa	√									
Spain		√	√ 15/	218	√ 23/	√ 6/	132		√ 6/	0
Turkey	√				√					
United Kingdom		√	√ 17/	379	√	√ 7/	138	56	√ 12/	62
United States		√	√ 9/	789	√	√ 8/	700	248	√ 2	104
Total	12	9	12	$2,608	16	10	$1,364	$458	9	$562

Source: Various government announcements and information on official websites. Average exchange rates for September - June.

Footnotes on following page.

1/ While China did not establish a capital plan, as part of the shareholding reform of large state-owned commercial banks, the government launched the reform of the Agricultural Bank of China during the global financial crisis, and injected US$19 billion into the bank.

2/ Plans include the Public Private Investment Program (PPIP) and Asset Guarantee Scheme (AGP), which are under TARP. TARP funds committed for PPIP range between $75-$100 billion and $3.5 bn thus far for AGP. The government commitments of $100 bn for PPIP and $3.5 bn for AGP are included here and under capital committed. See footnote eight also.

3/ Italy did not increase or expand its deposit insurance limit/coverage; however, the government will provide a "supplementary" guarantee: if the private scheme is unable to cover losses, the government will reimburse.

4/ In February 2009, government established a euro 12 billion (estimated) bond program designed to increase capital of banks. This implements a previous measure approved in October 2008. The first recapitalization bond was issued on July 31, 2009. This is not included in capital injections.

5/ Japan set aside Y12 trillion for recap and injected Y121 billion into 3 local banks. The Bank of Japan is also making available Y1 trillion in subordinated loans, of which Y20 billion has been provided. Loans not included in capital committed.

6/ In June 2009, the Orderly Bank Restructuring Fund was approved for a maximum of 99 bn euros which will be used for bank recapitalization and restructuring purposes. The program includes asset purchases, acquisition of capital instruments and guarantee measures. The amount is reflected under capital committed. In addition, in March 2009, the central bank extended a 9 bn euro emergency loan to a bank. This is not included in capital committed or injections.

7/ The U.K. authorities committed up to GBP 50 bn for recapitalization in October 2008, of which GBP 37 bn was injected . The authorities have also agreed in principle to inject up to GBP 41 bn (GBP 35 bn plus option for 6 bn) under the Asset Protection Scheme, but this is not yet reflected in capital injections as of 6/30/09.

8/ Amount committed represents the government's TARP program which includes various recapitalization programs for banks (CPP -- capital purchase program, TIP -- Targeted Investment Program, AGP -- Asset Guarantee Program), insurance companies, homeowners and consumers, and automotive financing and supply companies as well as the PPIP program. Amount injected relates to funds disbursed under the CPP, TIP, and capital provided under the AGP through July 2009.

9/ This represents the amount committed under the FDIC's Temporary Liquidity Guarantee Program. This program consists of two sub-programs -- Transaction Account Guarantee Program and the Debt Guarantee Program. Under the latter, the amount that could be issued at 6/30/09 was $789 billion while $339 was outstanding. Amount sourced from FDIC website.

10/ See also footnote 11. The government passed the Act to Further Develop Financial Market Stabilization which addresses distressed assets. The "bad" bank program under SoFFin has not been utilized as of August 18, 2009.

11/ This represents the Financial Market Stabilization Fund (SoFFin) whereby the government has commited up to 80 bn euros to recapitalize banks, purchase risky assets and provide guarantees.

12/ This represents the guarantees (GBP 35 bn plus option for 6 bn) under the Asset Protection Scheme which are also reflected under capital committed. See footnote seven.

13/ This includes the program (KRW40 tn) administered by Korea Asset Management Company which has not been tapped to date and the Emergency Credit Guarantee Program covering certain loans.

14/ This represents the Canadian Lenders Assurance Facility which covers federal and some provincially regulated DI's . This program has not been used as of June 2009.

15/ This amount includes an additional 64 billion euros in guarantees recently authorized by the government in July 2009.

16/ The Office of Financial Management will purchase A$ 8 billion worth of Australian residential mortgage-backed securities (non-toxic), of which A$ 4 bn will be allocated to non deposit-taking institutions. A$4 included here.

17/ This represents the Credit Guarantee Scheme (250 GBP) and the guarantee scheme for AAA rated ABS (guarantee commitment amount unannounced).

18/ The Dutch government did not specify an amount for the capital support scheme; however, 20 bn euro was made available at the time of the announcement in October 2008.

19/ No changes for federally-regulated deposit taking institutions but provincial government approved unlimited protection for credit unions.

20/ This represents the Insured Mortgages Purchase Program (C$125 bn) and the Canadian Secured Credit Facility (C$12 bn).

21/ This represents two programs introduced in 2002 that were terminated before the current crisis but reintroduced in February and March 2009.

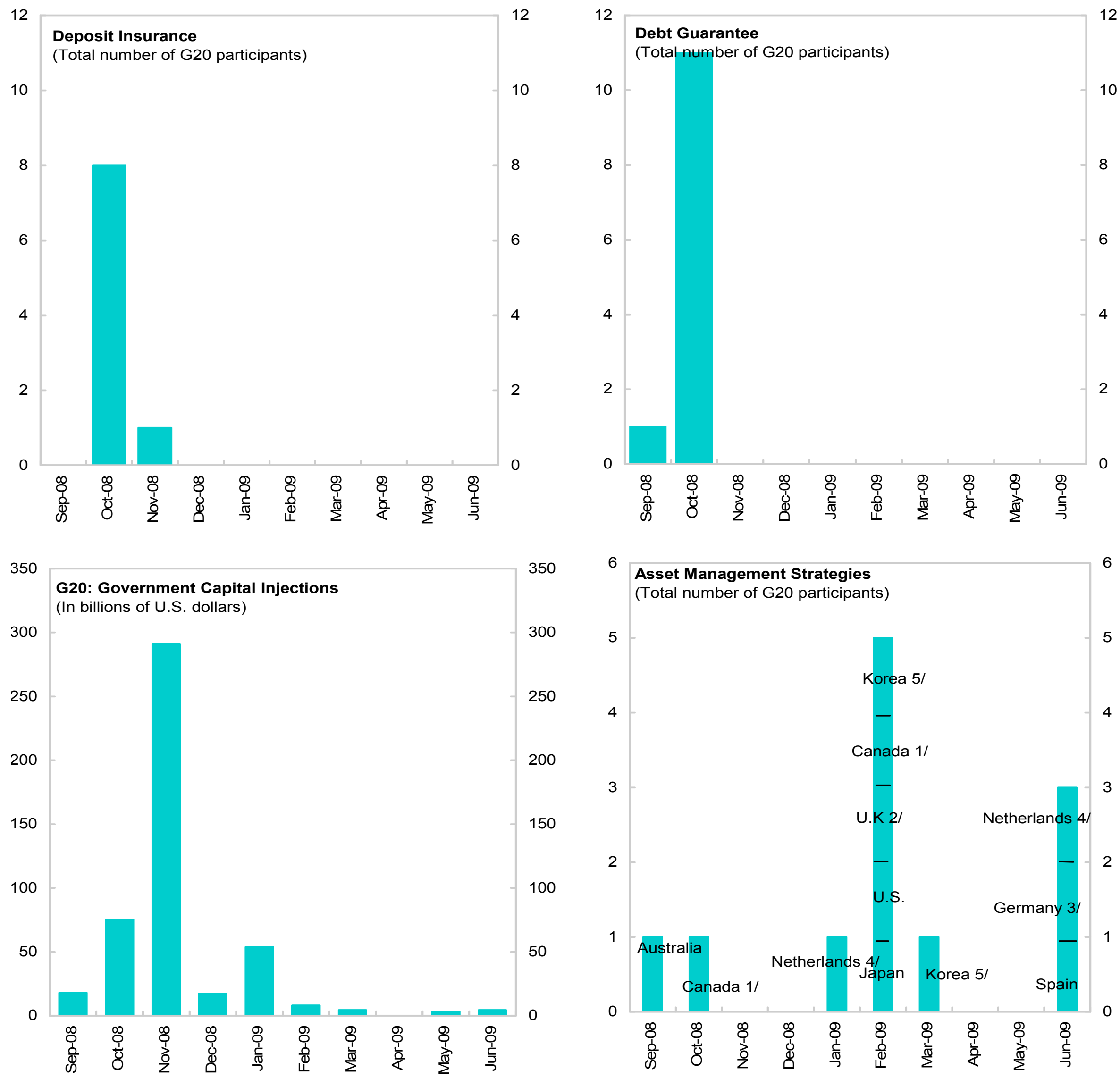
22/ Saudi Arabia does not offer deposit insurance but in October 2008, Saudi Supreme Economic Council announced that the government continues to guarantee the safety of local banks and bank deposits.

23/ This represents the FAAF, a 43.25 bn euro fund to buy high-quality assets from banks and other institutions.

24/ This represents the Dutch state's credit guarantee for a specific Dutch mortgage portfolio of ABN Amro and an illiquid assets back-up facility for ING's Alt-A portfolio. Euro 2.5 billion of guarantees associated with ABN Amro is in form of capital and also reflected as capital committed.

25/ Amount committed includes 460 rubles committed under OFZ bond scheme and 500 rubles already injected into a bank. The bond scheme was announced July 1, 2009.

Figure 1. G-20 Programs/Announcements, Sep 2008–June 2009



Source: Central Bank Websites.

1/ In October 2008, the government operated its first insured mortgage purchase program followed by another program (purchase of asset-backed securities) in February 2009.

2/ In February 2009, the government established the Asset Protection Scheme.

3/ In May 2009, the government agreed to adopt an act that will enable banks to deposit their toxic assets in a special purpose vehicle 'bad bank'. The first transaction with Landesbanks took place in June. The law was finally approved in July.

4/ In Janurary 2009 the government announced the Dutch state's credit guarantee for a specific Dutch mortgage portfolio of ABN Amro and, in June 2009, the government also announced illiquid assets back-up facility for ING's Alt-A portfolio.

5/ Korea established in February 2009 the Emergency Credit Guarantee Program, and, in March, announced that Korea Asset Management Company will purchase NPLs, troubled assets of financial institutions, and companies under restructuring.

As the immediate crisis waned, governments turned to the second phase of crisis management. A key element of this stage was an evaluation of the health of the banking system. In early 2009, both the United Kingdom and the United States announced they had conducted stress tests for key banks. In mid-2009, the Committee of European Banking Supervisors (CEBS), together with the ECB and the EC announced a coordinated, system-wide stress test. In addition, a number of European countries have been undertaking stress tests of key domestic and global private financial institutions. While the United States opted to publish such final results, other countries have not made such results public. More recently, a few governments have begun establishing programs for managing impaired assets, but progress in this area has been more limited.

C. Overall Assessment of Progress

Programs to stabilize creditor expectations and recapitalize weakened financial institutions were successful, but the crisis management frameworks remain incomplete. The March 2009 stocktaking paper acknowledged the success in the first stage of crisis management.[4] At the same time, it proposed four priorities for addressing the next stage of banking system restructuring:

- developing mechanisms for coordinating crisis-management policies;
- conducting a diagnosis of financial institutions' soundness and capitalization needs;
- developing restructuring and/or recapitalization strategies for undercapitalized banks, based on a diagnosis that includes a methodology for valuing distressed assets; and
- developing asset-management strategies.

This paper classifies the G-20 countries by the status of their publicly announced programs aimed at achieving these priorities. The actions of each country, described in Statistical Appendix Table I, have been classified into three categories based on the status of announced programs:[5]

- Announced — Programs announced but not yet implemented.
- Underway — Programs announced and implementation is in progress.
- Completed — Programs announced and completed implementation.

[4] Group of Twenty—Note by the Staff of the International Monetary Fund on Stocktaking of the G-20 Responses to the Global Crisis, EBS/09/29, March 10, 2009.

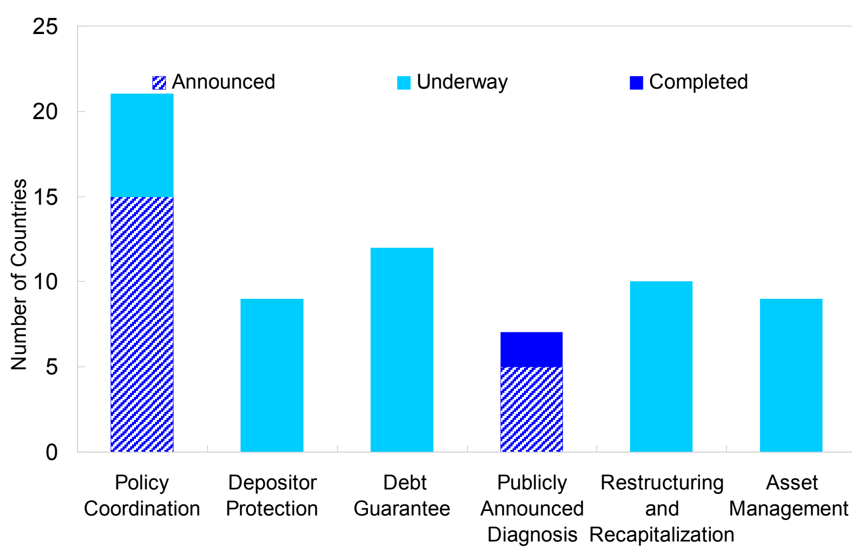
[5] The table is based on responses received from the authorities to a survey conducted for this paper.

As described above, the focus of this classification is on publicly announced policy packages. This approach understates progress made in meeting key priorities, as a number of countries are implementing measures, but not announcing them as part of new policy packages. Such countries have either been less affected by the crisis or have opted to manage financial distress within their existing regulatory and institutional framework.[6]

Progress in meeting the publicly announced crisis management priorities has been uneven. While successful in providing creditor protection and recapitalizing distressed institutions, progress in bank diagnosis and asset management has been more limited (Figure 2).

- The objective of policy cooperation has been announced, but few countries have sought broad cooperation in a public and recognizable fashion.
- Just over half of the G-20 countries have announced and begun to implement restructuring or recapitalization strategies.
- Few countries have publicly announced a formal evaluation of their financial system.
- Less than half of the countries have announced asset-management programs and only 55 percent of those have had transactions occur.

Figure 2. G-20 Financial Crisis Program Status



[6] The focus on publicly announced programs reflects the possible benefits of such announcement in crisis management. Public announcements demonstrate the authorities' diagnosis and their policy approach, allow for easier cooperation across borders, and may help guide private sector expectations.

Differences exist among regional groupings of G-20 countries.[7] Overall, Continental Europe (five countries) has announced more crisis-management programs than other regions, primarily focused on protecting creditors and restructuring and recapitalizing the banks. They are now planning systemic evaluations of the banks' financial conditions. The United Kingdom and the United States, partially reflecting their position at the epicenter of the crisis, are relatively far advanced as well. Evaluations of the financial system have been completed; and both the restructuring/recapitalization programs and the asset management strategies have been announced and are underway for the United Kingdom and the United States though they are in various stages of completion.[8] Few countries in the Western Hemisphere, (excluding the United States) have announced crisis-management policies. Most countries in Asian countries have taken at least one type of action during one phase of the crisis with two countries announcing plans in four crisis-management areas.

D. Level of Public Support

Total expenditures in public recapitalization to address the crisis have been below historical norms. Bank recapitalization expenditure for countries undergoing a systemic crisis in the past has averaged 15 percent to 20 percent of GDP. As of June 2009, total recapitalization expenditures of the G-20 countries amounted to the equivalent of US$458 billion (Table 2). The Netherlands injected the largest relative amount (3.6 percent of GDP) followed by the United Kingdom (2.6 percent) and the United States (1.8 percent.).[9] If the calculation is limited to only those G-20 countries that have injected public funds (China, France, Germany, Japan, Netherlands, Russia, Korea, United Kingdom, and the United States), the total public sector expenditure on bank recapitalization amounted to less than 1.0 percent of their GDP.[10] This relatively low level reflects a variety of factors, including the rapid containment of the crisis; the extensive use of guarantees; and, to a limited extent, accounting changes to limit asset price volatility.

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[7] We have grouped countries into several regions: Africa, Asia, Europe, Middle East and Western Hemisphere. See Statistical Appendix Table 1 for regional groupings.

[8] The PPIP has been revised and, while the legacy securities program is moving ahead on the original track, the pilot program for the legacy assets (loans) now includes only receivership assets. For the U.K., the asset protection scheme announced in February 2009 awaits final agreement between the authorities and the banking groups.

[9] Capital expenditures by the United States exclude support to nonbank financial institutions.

[10] GDP data was calculated as the sum of Q3 2008 through Q2 2009. For countries where nominal GDP data was unavailable from WEO, real GDP and the GDP deflator were used to compute nominal GDP. The exchange rate to calculate the U.S. dollar GDP was calculated as the average from July 2008 through September 2009.

Public commitments to recapitalization, creditor guarantees, and asset protection were considerably higher. The G-20 countries committed the equivalent of approximately 7 percent of GDP, representing commitments for debt guarantees, capital injections, and asset protection. Commitments for debt guarantees form the largest portion of overall commitments, followed by capital commitments and asset management. The Netherlands has committed the largest portion (42 percent of GDP) followed by the United Kingdom (27 percent). France, Germany, and Spain have committed in the order of 18 percent to 25 percent. These amounts may overstate the eventual expenditures of the G-20 countries—if economic conditions improve, not all committed funds may be spent.

Table 2. Public Sector Support

	Committed				Injected	Committed	Injected
	Guarantees 2/	Capital 1/	Asset Protection	Total	Capital		
	(In billions of US dollars)					(In percent of GDP)	
Argentina							
Australia			3	3		0.3	
Brazil							
Canada			115	115		2.1	
China		19		19	19	0.2	0.2
France	425	53		478	33	18.7	1.3
Germany	531	106		638	53	19.9	1.6
India							
Indonesia							
Italy		16		16		0.8	
Japan		124	217	341	1	1.7	0.0
Mexico				0			
Netherlands	266	30	32	328	28	42.4	3.6
Russia		31		31	17	2.3	1.2
Saudi Arabia							
South Africa							
South Korea		15	30	45	3	5.8	0.4
Spain	218	132		349		24.3	
Turkey							
United Kingdom	379	138	62	579	56	26.7	2.6
United States	789	700	104	1,593	248	11.4	1.8
Total	2,608	1,364	562	4,534	458	6.8	0.7

Source: Table 1

1/ The capital committed amounts for the United Kingdom, United States, and Netherlands include the amounts committed for asset protection as the recapitalization plans in these countries address capitalization needs and distressed assets.
2/ Not all countries providing debt guarantees announced a specified committed amount, therefore, total costs may be understated.

III. Detailed Crisis Response Measures Since March 2009

A. International Cooperation

Recent developments

International cooperation was initially limited but, as the crisis ebbed, greater efforts were made at cooperation and information sharing. The early and rapid expansion of depositor protection was managed, at best, through low-key and informal discussions through existing channels. As such, these actions conveyed the appearance of a lack of cooperation among the G-20 countries.[11] Some countries, particularly in the EU, acknowledged the importance of coordination. The EC identified critical elements of policy packages and has sought to enhance information sharing. As conditions stabilized, a number of international organizations have begun to serve as fora for disclosure about the scope of measures and discussions of the direction of policy changes.

Assessment

While cooperation is improving, coordination of policies among countries remains an elusive objective. The benefits are recognized, but domestic constraints have, at times, overshadowed efforts of such coordination. As the crisis is contained and the need for extraordinary protection measures ease, the need for closer ex ante policy coordination may grow as countries begin to unwind crisis management policies. Two separate challenges exist. First, the internal coordination among government agencies in the design and implementation of unwinding policies can be strengthened. Second, mechanisms for coordination across countries must be enhanced, so that individual unwinding of protection does not jeopardize progress to date at stabilizing the global financial system. International fora, such as the Financial Stability Board (FSB) or the IMF, could facilitate such efforts by identifying high-level principles for key policy decisions and facilitating the information exchange and coordination among countries.

Public coordination and effective communication of policy objectives are related objectives in crisis management programs. Effective communication of the authorities' assessment and policy direction should be used to strengthen and enhance credibility of a policy package. Such communication can guide private expectations, explaining expected adjustments in policy direction.

[11] While the EU did cooperate in the setting of depositor protection levels—suggesting that coverage be increased to between EUR 50,000 and EUR 100,000—cooperation in other elements of crisis management was limited.

B. Diagnosis

Recent developments

Countries have followed different approaches concerning diagnosis of the conditions of their financial systems. No country has yet undertaken a publicly announced, full diagnosis of the medium-term viability of their financial systems. Such a financial sector diagnosis, similar to what has been done as part of IMF programs in past crises, includes an evaluation of the strength of major borrowers, a review of the medium-term viability of the banks' business models, and the prospects for medium-term profitability in the new economic reality emerging from the crisis. Instead, countries have relied on stress tests to evaluate the susceptibility of key banks to specified shocks. Countries have differed to the extent that (i) they have announced their activities; and (ii) they have published results.

Beginning in 2009, the United Kingdom and the United States began wide-ranging stress tests. In March, the United States conducted stress tests of selected banks and made public the results. Those tests showed that capital shortfalls were manageable. In addition, during the first quarter, the United Kingdom conducted detailed inspections and stress tests for key banks. The results of the tests were not published but used to determine participation in the authorities' Asset Protection Scheme (APS).

Following the experience of the United Kingdom and the United States, a number of countries planned stress tests on targeted institutions. The Committee of European Banking Supervisors (CEBS) together with the ECB and the EC announced a coordinated, system-wide stress test in May 2009.[12] The project is to be completed by September 2009 and aggregated results will not be made public.

Assessment

System-wide diagnoses of financial sector distress remains limited. Stress tests may not assess the medium-term viability of a financial institution. Responses to shocks, while an important input in such evaluation, excludes important elements, including the strength of the key borrowers, the viability of the business model, and the competitive position of the institution. For that reason, countries may consider turning to a more comprehensive methodology for diagnosing the medium-term viability of financial institutions.

Countries have largely opted not to publish the results of bank-by-bank stress tests, reflecting a number of concerns about publication. One concern is that if severe but plausible stresses are applied these parameters may be interpreted as economic predictions. Publication of results, therefore, could worsen private confidence in the economy. Moreover,

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[12] This exercise uses common methodologies and scenarios developed by CEBS.

concern about such market reaction could lead countries to understate the stresses used to test the banking system and under-diagnose potential financial weaknesses. Given these different approaches, there could be benefits to international coordination of publication policies in order to avoid competitive disadvantages of an uncoordinated approach.

Publication of stress tests results can be positive if accompanied by commitments to inject capital and policies to address weak banks. Publication of results should be combined with a publicly announced strategy to address any weak banks to avoid a disorderly response in the markets. If stress tests identify a bank as potentially weak but no action is taken, creditors may reduce exposure or even run from the banks. Identification of potential losses without the policy instruments to provide any required capital could harm, not strengthen private confidence. Policy responses could include immediate supervisory actions or recapitalization either by private sources or through a public-private recapitalization program.

C. Creditor Guarantees

Recent developments

Creditor guarantees were put in place early in the crisis. Countries increased deposit insurance levels, providing blanket guarantees in some cases. In many cases, the governments also provided wholesale debt guarantees. The implementation of debt guarantees reduced concerns about counterparty risk, facilitating access to market financing. The largest use of such programs was made by financial institutions in France, Germany, the Netherlands, the United Kingdom, and the United States.

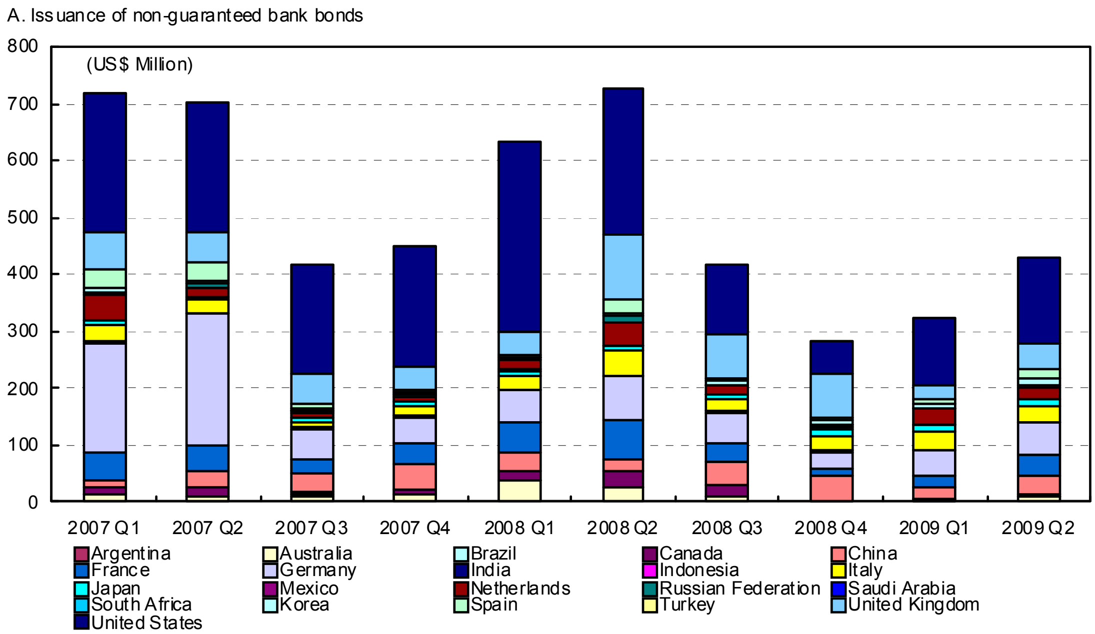
Differences exist in the structure of the guarantee schemes. In the United States, guarantees applied to all new eligible issuances, unless the bank explicitly opted out of the program. All other programs were considered “opt-in” systems where the banks were required to apply for support. This difference affected the market view of participation in the program. In the United States, participation carried limited market news, while in the “opt-in” programs the market was alerted to potential bank difficulties. In addition, the pricing system differed. The United States implemented a flat-fee approach while the European approaches applied fees that varied with the banks’ riskiness.

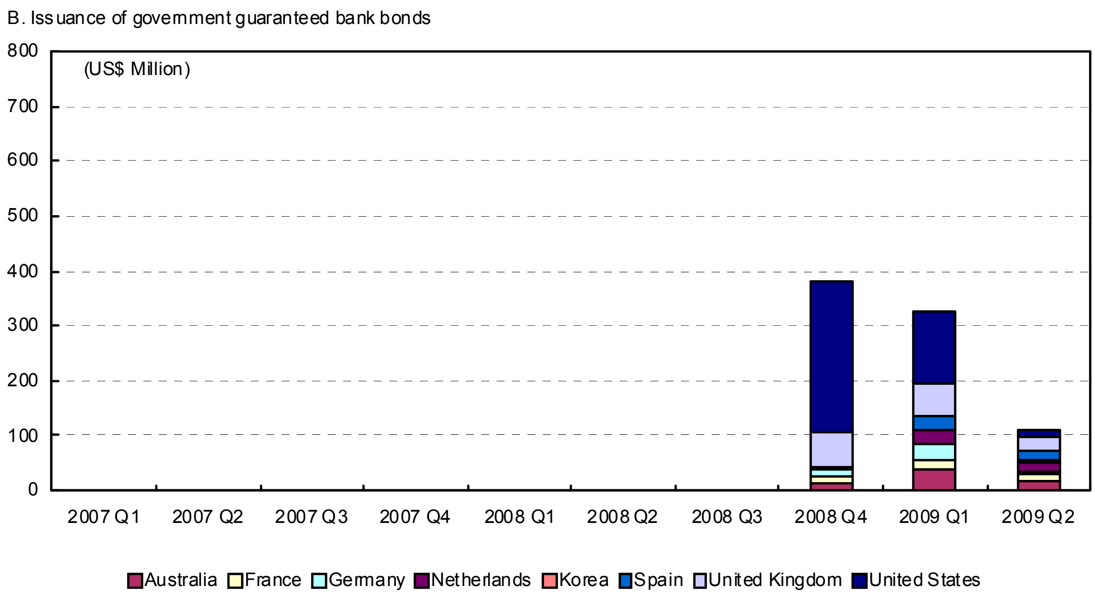
Assessment

The guarantee programs were successful in improving market access. Overall, bond issuance increased in the first half of 2009. Banks in the United Kingdom and the United States were the largest issuers in early 2009, although Australian banks, that were relatively unaffected by the crisis, took advantage of the easing market conditions, and German and Spanish banks became active issuers (Figure 3).

The debt guarantee programs had additional benefits. By reassuring creditors about the intentions of the authorities to support the financial systems, overall confidence began returning in early 2009. As a result, the issuance of nonguaranteed debt also began to increase, reflecting greater access to market funding (Figure 3). While such levels have not returned to previous levels, this represents an improvement in the funding capacity of the banks.

Figure 3. G-20: Issuance of Bank Bonds, Q1:2007-Q2:2009





Source: Dealogic.

D. Capital Support

Recent developments

Government injection of capital slowed in the second quarter of 2009. Since March, governments injected the equivalent of US$75 billion. Three countries represented almost all of these injections (France, Germany, and the United States). This level of capital injection is substantially below the US$384 billion injected during the period September 2008–February 2009, and reflects, in part, the stabilization of the financial systems and, in part, renewed access to private markets for bank capital.

Since March 2009, two G-20 countries established formal recapitalization or restructuring plans to support their banking systems – Russia, and Spain. While the governments of these countries announced their intentions to assist banks in late 2008, no formal plans had emerged until recently.[13] The Russian government announced on July 1, 2009 that approximately RUB 460 (approximately US$15 billion) will be made available to recapitalize banks in 2009/2010. The government will issue bonds and these would be exchanged for preferred shares in banks. At the same time, Spain established the Orderly Bank Restructuring plan with an initial EUR 9 billion committed funds (about US$12 billion). The purpose of the plan is to boost confidence and encourage mergers, and it appears that it can be used for recapitalizing and restructuring.

Assessment

The reduced public sector outlays for recapitalization in the first half of 2009 may not be sustained. The stress tests may identify further potential losses that will need to be addressed. Moreover, two developments could increase the need for capital injections. First, the global recession, while showing signs of easing, may result in significant increases in NPLs that banks will have to absorb (see Section IV A). Second, recent accounting changes, limiting the requirement for mark-to-market, could be rolled back, re-introducing an element of asset price volatility and the need for strengthening capital buffers. If such capital needs cannot be raised in private markets, public resources may be required.

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[13] In October 2008, Spain's government authorized the purchase of bank's shares, if requested by the credit entities to reinforce their capital.

Table 3. G-20 Capital Support [1/]

(In billions of U.S. dollars)

Country	Total (Sept. 08 - Feb '09)	Total (Sept '08 - June '09)
Argentina		
Australia		
Brazil		
Canada		
China	19.0	19.0
France	15.1	33.1
Germany	10.8	52.8
India		
Indonesia		
Italy		
Japan		1.2
Korea		3.0
Mexico		
Netherlands	26.6	28.0
Russia	17.2	17.2
Saudi Arabia		
South Africa		
Spain		
Turkey		
United Kingdom [2/]	56.2	56.2
United States [3/]	238.8	247.9
Total	**383.7**	**458.4**

Note: Average exchange rates from 10/08 - 02/09 are used for Totals (Sept. 08 - Feb. 09) and average exchange rates from 10/08 - 06/09 are used for Totals (Sept. 08 - June 09).

1/ Amounts represent actual capital injected into banks from government and does not include capital committed and not yet reflected in banks' balance sheets nor amounts repaid.

2/ Additional capital to be provided under the Asset Protection Scheme (GBP 35 bn plus an option for an additional 6 bn) has been agreed in principle but not reflected in capital injections as of 6/30/09.

3/ Includes amounts injected from TARP (Capital Purchase Program, Targeted Investment Program, and Asset Gurantee Program) by governments in form of capital as of 06/26/09.

E. Asset Management

Recent developments

The treatment of distressed assets has been addressed in widely different ways. Some countries opted to guarantee assets held on the books of the banks, while other countries opted to remove distressed assets (Table 4). In some cases, countries have changed direction as the asset-management programs have progressed. Overall, programs to guarantee assets appear to be further advanced than those designed to remove distressed assets from bank balance sheets.

- Guarantees: With respect to the former, the Netherlands, the United States, Korea, and the United Kingdom have introduced programs to guarantee distressed assets.[14] The Netherlands' and the United States' programs have been utilized for specific banks and transactions have also occurred under Korea's program. While the United Kingdom's program is closed, the final arrangements with two major banks approved under the program are still pending.

- Removal of distress assets: The United States' PPIP has been redesigned so that the legacy (existing) loans portion of the program only applies to receivership assets at this point. The legacy securities portion of the program is moving forward; however, no transactions have occurred as of June 30, 2009. Similar federal programs in Germany, Spain, and Korea have not yet been used. Given the low activity with respect to removing distressed assets, it appears that countries may have opted to provide asset guarantees to limit the capital impact of asset volatility as opposed to eliminating the distressed assets entirely and shrinking the balance sheets.

In early 2009, both the United Kingdom and the United States established strategies to deal with distressed assets. The Public Private Investment Program (PPIP) in the United States is slowly being implemented, but has changed direction along the way. The original program was designed to remove bad assets (whole loans and structured loan products) from all banks; however, in June 2009, the government announced that the program for legacy asset purchases (whole loans) would apply only to banks that have failed and been put into receivership. Assets held by operating banks would remain the banks' responsibility. The implementation for the portion of the program addressing distressed structured loan products continues to make progress. The United Kingdom's APS provides protection against credit losses on pools of specified assets above a specified threshold (i.e., the first loss); however, in contrast to the United States' PPIP, the APS does not remove assets from the balance sheet. The application period closed on March 31, 2009 and two

[14] See footnotes to Table 4 for specific country programs.

major banks are considering participation. The program targets risky assets and the first loss portion will be met with a deduction from capital.

Table 4. Summary of Asset Plans Established

	Purpose		Quality of Assets		Type of Asset Purchased and Guaranteed				
					Loans	Structured Products		Other Assets	
	Liquidity	Address Distressed Assets	High quality	Toxic	Mortgage loans	Mortgage backed securities	Other asset backed securities	Investment securities	Other
Australia [1/]	√		√			√			
Canada [2/]	√		√		√		√		
Germany [3/]		√		√		√			√
Japan [4/]	√		√					√	
Korea [5/]	√	√	√	√	√				√
Netherlands [6/]	√	√	√	√	√				
Spain [7/]									
United Kingdom [8/]		√		√	√	√	√		
United States [9/]		√		√	√	√	√		

1/ The Office of Financial Management will purchase Australian residential mortgage-backed securities (non-toxic). The first purchase was in December 2008.
2/ This represents two programs established in Canada. Under the Insured Mortgages Purchase Program, the government will purchase insured mortgage pools consisting of high quality assets and under the Canadian Secured Credit Facility, the government will purchase asset backed securities backed by loans and leases on vehicles and equipment. Transactions have occurred under both programs.
3/ Purcahses under Germany's plan will comprise toxic sub prime real estate securities and other problem assets, business lines, or subsidiaries from banks.
4/This represents two stock purchase programs reintroduced in Japan.
5/ Korea will purchase assets through Korea Asset Management Company which will include non-performing loans, troubled assets, and companies under restructuring. No purchases to date as of June 30th. Korea will also guarantee certain loans (e.g., SMEs) under the Emergency Credit Guarantee Program (new loans and rollovers of existing loans).
6/ This represents the Dutch state's credit guarantee for a specific Dutch mortgage portfolio of ABN Amro and an illiquid assets back-up facility (guarantee) for ING's Alt-A portfolio.
7/ Spain approved a program in the June 2009, the Orderly Bank Restructuring Plan, which is designed to provide support and manage the restructuring of banks. Specifics of this plan are yet to be determined.
8/ This represents the Asset Protection Scheme which guarantees assets. Final arrangements are pending for two banks.
9/ This includes the Public/Private Investment Program (PPIP) and the Asset Guarantee Scheme (AGP). Under the PPIP, the legacy (loan) assets program is being implemented for receivership assets only at this point. The legacy securities portion of PPIP has selected private managers to manage the securities. Guarantees provided under the AGP include covered asset pools consisting of securities and residential, consumer and corporate loans.

Since March 2009, three countries have established asset-management strategies to deal with distressed assets and/or to guarantee other assets. Some of the programs established have aimed at providing liquidity to banks, while others have sought to remove distressed assets from bank balance sheets.

- Korea announced in March 2009 that the state-owned Korea Asset Management Company would issue KRW 40 trillion in government-guaranteed bonds to purchase nonperforming loans, troubled assets of financial institutions, and companies under restructuring. The fund will be in operation until 2014; however, as of July 2009, it has not been utilized by banks. Early in the year, the government also created an Emergency Credit Guarantee Program, which will be available until the end of 2009. This is designed to assist Small and Medium Enterprises. Guarantees will be covered by Korea Credit Guarantee Fund and Kibo Technology Fund, including those that mature in 2009, which will be rolled over fully automatically.

- Germany approved a "bad bank/good bank" program in July 2009 to deal with distressed assets. This action followed an approval for the state Landesbanks to transfer their structured securities to a special "bad bank" vehicle. The government had been considering such a plan since October 2008, when the government announced the Law on the Financial Market Stabilization Fund (SoFFin).

- In June 2009, Spain established the Orderly Bank Restructuring plan with an initial EUR 9 billion committed funds (about US$12 billion). The plan may be used for removing distressed assets and for financing recapitalization and restructuring.

Assessment

Guaranteeing assets provides time to restructure distressed assets, but may not be sufficient to restore confidence in the banks. Guarantees may be the most effective option when there is an expectation that asset values will recover. Such guarantees provide time for the restructuring of assets by institutions that may have close relationship with the borrowers. Also, if the bank is able to obtain the benefit of a risk transfer with an asset guarantee, (i.e., capital requirements are lowered due to lowered risk weighted assets) then incentives to remove the assets altogether may be reduced. However, there may be conditions when guarantees would be ineffective and renewed efforts would be needed to remove distressed assets or more completely neutralize them from banks' operations. Moreover, a reason for the reduced emphasis in removal of assets is that changes in accounting rules have limited price volatility arising from mark-to-marketing asset prices. However, if accounting rules concerning mark-to-market were to be reinstated, asset volatility would return, undermining private confidence in the capital buffers in the financial system. A second reason to continue to explore asset removal programs is that some assets, particularly complex structure products, may be difficult to resolve and may remain on the banks' books for a considerable period, undermining bank profitability. Third, perceptions of bank soundness could be enhanced by removal of the assets. Such removal would formalize the true amount of all losses, ensuring that "legacy losses" are fully addressed. Finally, removal of such assets would allow banks to focus on managing their future activities rather than on legacy/problem assets.

IV. Impact of Policy Measures

A. Financial Intermediation

Overall credit growth continued to decline in the first quarter of 2009; The causes of this decline, however, are difficult to determine. At this point, the supply effects cannot be distinguished easily from the demand impact of the global slowdown (Table 5). While banks have sought to preserve liquidity in the face of future uncertainties, credit demand has also fallen as a result of the global slowdown in economic growth. As stabilization policies are maintained and private expectations about continued financial stability and banking soundness improve, credit expansion should begin to recover.

Table 5. G-20: Growth Rates of Net Credit to the Private Sector

(Quarter on quarter percent change)

	2007Q3	2007Q4	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1
Argentina	10.4	9.2	4.6	6.6	4.7	2.7	2.7
Australia	4.1	5.3	2.9	4.0	2.9	2.2	1.8
Brazil	11.7	2.9	11.8	1.4	9.1	4.9	1.3
Canada	1.6	2.8	4.1	-1.0	0.3	1.9	…
China	4.1	1.8	5.1	3.4	2.9	1.7	14.0
Euro Area	2.2	3.6	2.8	2.2	1.5	1.4	0.5
India	5.8	5.5	9.7	2.0	5.3	3.6	5.3
Indonesia	6.6	6.0	4.7	10.0	8.1	4.8	-0.7
Japan	0.4	0.5	-1.2	1.5	-1.5	2.4	-1.2
Mexico	6.1	2.1	-1.4	3.4	-1.5	1.4	-0.1
Korea	2.9	2.5	4.6	4.7	3.7	1.0	1.9
Russia	11.4	10.0	8.3	9.5	8.3	6.1	2.7
Saudi Arabia	7.1	5.4	8.3	10.2	5.5	0.8	-0.8
South Africa	6.0	4.4	1.6	3.1	3.3	1.5	2.2
United Kingdom	4.6	3.2	5.6	0.7	3.2	5.0	0.0
Turkey	5.9	7.6	10.1	7.3	5.2	0.0	-0.2
United States	2.9	2.7	1.6	-0.1	0.7	-0.2	1.0

Source: IMF, *International Financial Statistics*.

The ongoing increase in nonperforming assets could weigh on the credit expansion (see below and Figure 6). As the ongoing economic recovery will reduce unemployment rates and corporate bankruptcies only over the medium term, some near-term increase in nonperforming loans can be expected. This increase in nonperforming loans could put pressure on bank profitability as banks raise provisions against expected loan losses. As a result, strong earnings experienced by many banks recently are unlikely to be sustainable. Banks would then likely cut loans to lower-quality borrowers to minimize exposures.

B. Effect of Government Measures on Market Indicators

While the impact of the G-20 policy measures on GDP is difficult to assess, the financial market view of the evolving measures can be observed. The size and breadth of the public interventions in the financial system have led to a generalized easing of stress in financial markets, but conditions still remain far from normal. Liquidity facilities administered by central banks, public debt guarantee, and recapitalization programs have stabilized private confidence, and the sharp spikes in risk aversion have eased. Major market indicators have come off historical highs, but remain above historical averages.

Public interventions and guarantees have eased pressures on repo and other interbank markets since September 2008. Lehman Brother's bankruptcy in September 2008 led to a major increase in counterparty risk and a large contraction of repo operations amongst European, U.K., and U.S. banks. As a way to boost liquidity and offset the contraction in repo operations, central banks significantly expanded the pool of collateral that they use in their repo and reverse repo operations. In addition, government guarantees lowered short-term funding costs.

As a result, Libor rates responded positively to official measures. After spiking in September 2008, three-month Libor rates narrowed thereafter in response to the various support programs (Figure 4). In most cases, this reflected a reduction in counterparty and liquidity risk, as shown by the spread between the Overnight Indexed Swap (OIS) rate and the Interbank Offering rates published by the British Bankers' Association for the major currencies. Moreover, the swap spread—the average premium required on a vanilla interest rate swap to account for counterparty risk—has fallen to pre-crisis levels.

The easing of interbank liquidity also set the base for a more generalized improvement of credit conditions in line with central banks' actions in policy rates. The European, U.K., and U.S. banks' debt prices plummeted after Lehman Brother's bankruptcy. The October 2008 public interventions and guarantees led to partial recovery, but debt prices plunged again in December 2008 (Figure 5). Since the February 2009 restructuring and asset-management policy measures, bank debt prices have increased to pre-crisis levels, except in the United Kingdom.

CDS spreads have also eased over the period. The deep uncertainties in Q3:2008 led to historically high spreads. Even though public guarantees and bank recapitalization programs have been successful in easing market concerns about counterparty risk, CDS spreads, although lower, remain elevated, indicating that credit conditions remain fragile. As the measures begin to take effect and as the depth of the current global recession becomes clearer, uncertainties in the market may ease, leading to even lower spreads.

The October 2008 bank debt guarantee programs were key to restoring bank debt issuance. As spreads have fallen, financial institutions have begun to have their access to market financing restored. In Q3:2008, the issuance of nonguaranteed bank debt declined by 42 percent to US$417 billion in G-20 countries. The debt guarantee programs have allowed banks to partially offset the sharp decline and raise more than US$706 billion in guaranteed debt in Q4:2008 and Q1:2009. As the financial constraints on banks eased in Q2:2009, banks resumed the issuance of nonguaranteed debt while discontinuing the issuance of guaranteed debt.

The easing of financial constraints, together with public support for financial institutions in Q1:2009, led to a partial recovery in bank stock prices. Bank stock prices showed some recovery from the troughs of early 2009. Prices in the United Kingdom and United States fell farther than other bank stock prices and have not recovered their pre-crisis levels. This may reflect the uncertainty related to deteriorating macroeconomic conditions despite the comprehensive restructuring and asset management support measures announced in both countries in Q1:2009, and uncertainty regarding bank business models and future regulatory changes.

V. Conclusion and Recommendations

The March 2009 stocktaking paper recognized progress in stabilizing credit expectations and recapitalizing distressed banks but made a series of recommendations aimed at intensifying and accelerating the recovery process. Those recommendations included (1) the establishment of mechanisms for coordinating restructuring policies; (2) development of a comprehensive diagnosis of the financial institutions; and (3) establishment of restructuring strategies that addressed the valuation of distress assets.

Limited progress has been made in the second phase of crisis management:

- Formal policy cooperation remains at an early stage. In many cases (particularly outside of the EU), it has largely been through low-key and existing channels, which has had only a limited impact on public perceptions of the consistency of reform programs across countries. Only limited progress has been made in the coordination of policy responses.

- The stress tests for individual institutions have been initiated in a few jurisdictions and the results have been tied to a recapitalization or asset guarantee program; however, specific full-scope diagnosis of financial sector systems remains limited.

- Restructuring and asset-management programs have been initiated, but many programs are still at an early stage of implementation.

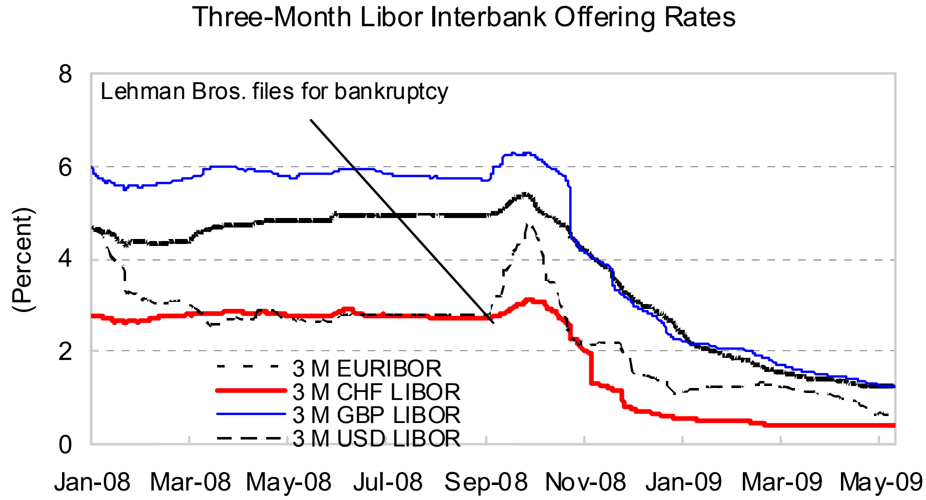
Despite the limited progress, financial markets have responded positively and have stabilized. CDS spreads have eased and the October 2008 bank debt guarantee programs have allowed banks to resume the issuance of nonguaranteed debt. The easing of financial constraints, together with public support for financial institutions, has led to a partial recovery in bank stocks.

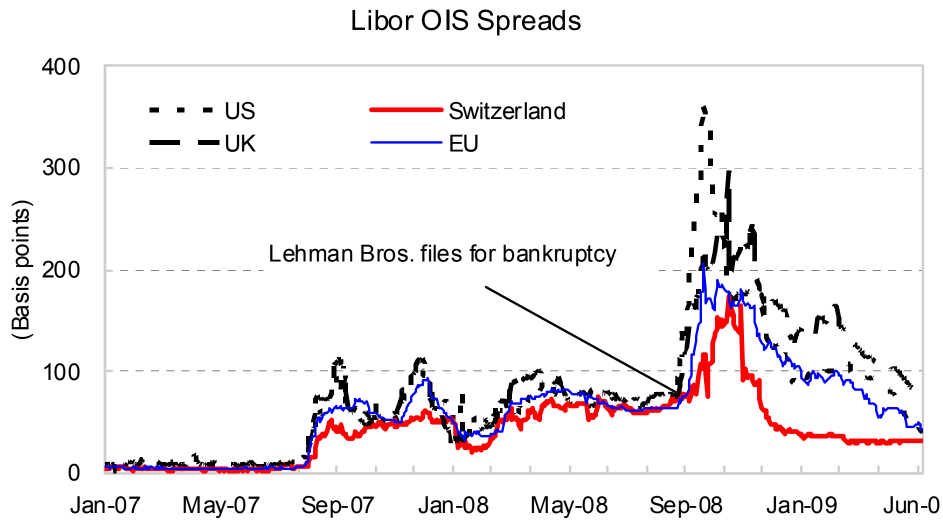
While the easing of interbank liquidity may gradually ease credit conditions, increases in nonperforming loans may be expected to dampen the pace of credit intermediation. The ongoing economic recovery will have an impact on unemployment rates and corporate bankruptcies only in the medium term. This could put pressure on bank profitability in the near term as banks raise provisions against expected loan losses, and would then reduce loans to lower-quality borrowers to minimize exposures. As a result, the pace of credit intermediation will improve slowly.

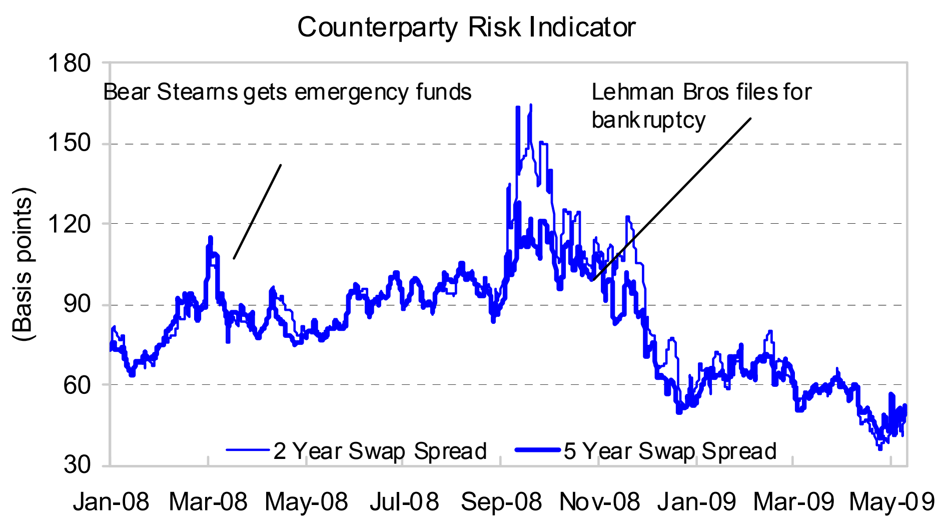
Areas for further actions include:

- developing mechanisms for coordination of polices, including the disengagement from creditor- protection policies;
- completing a comprehensive diagnosis of the banking system, in particular in light of the possible increase in nonperforming loans over coming months;
- combining stress testing initiation with policy instruments to address weak banks, so as to strengthen private confidence; and
- enhancing progress in developing programs for asset management. While many jurisdictions have guaranteed distressed assets, only a few have programs to actively manage them. Strategies should be strengthened for neutralizing legacy or toxic assets and programs developed to address any spike in nonperforming loans.

Figure 4 . Interbanking Lending Rates

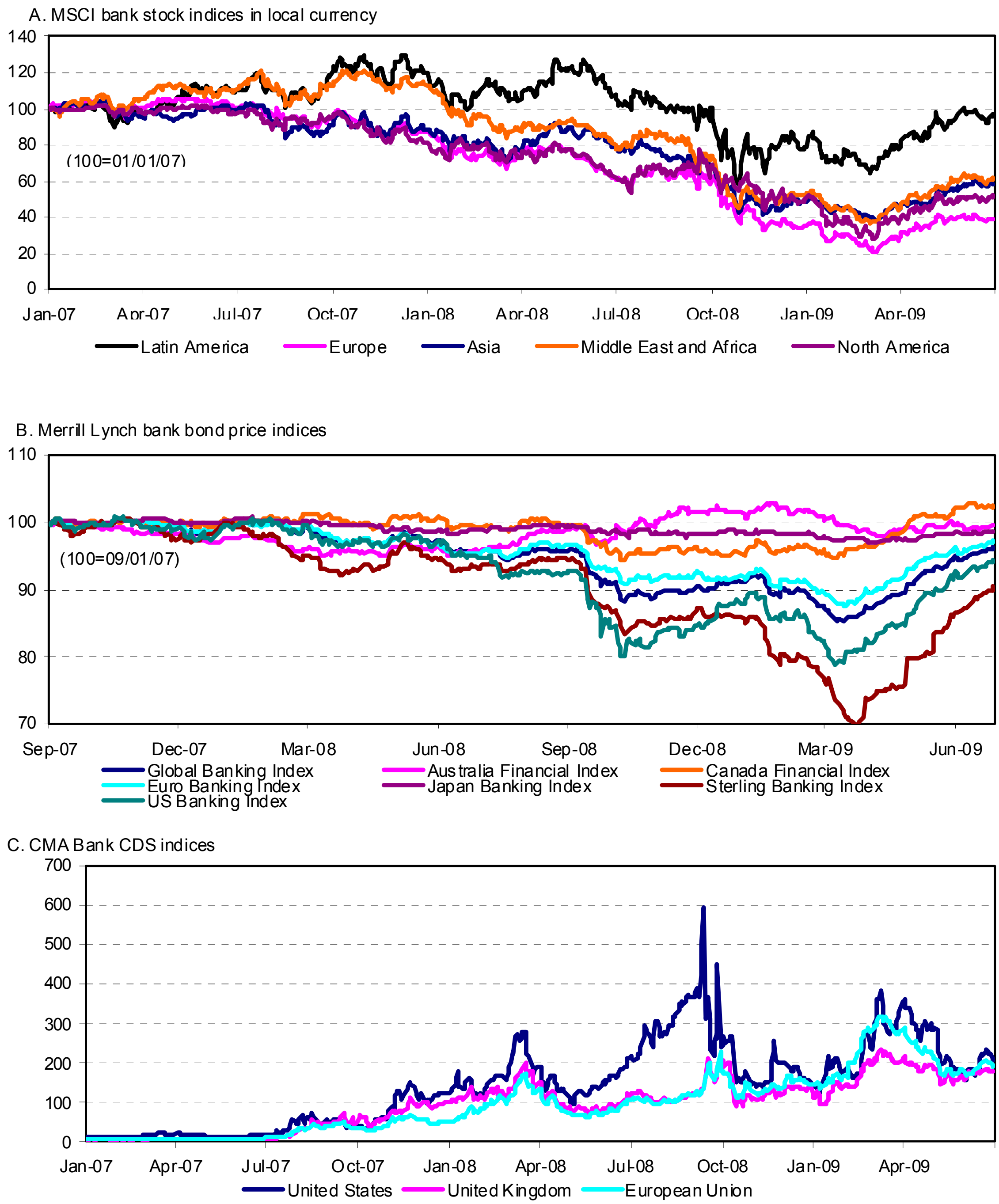






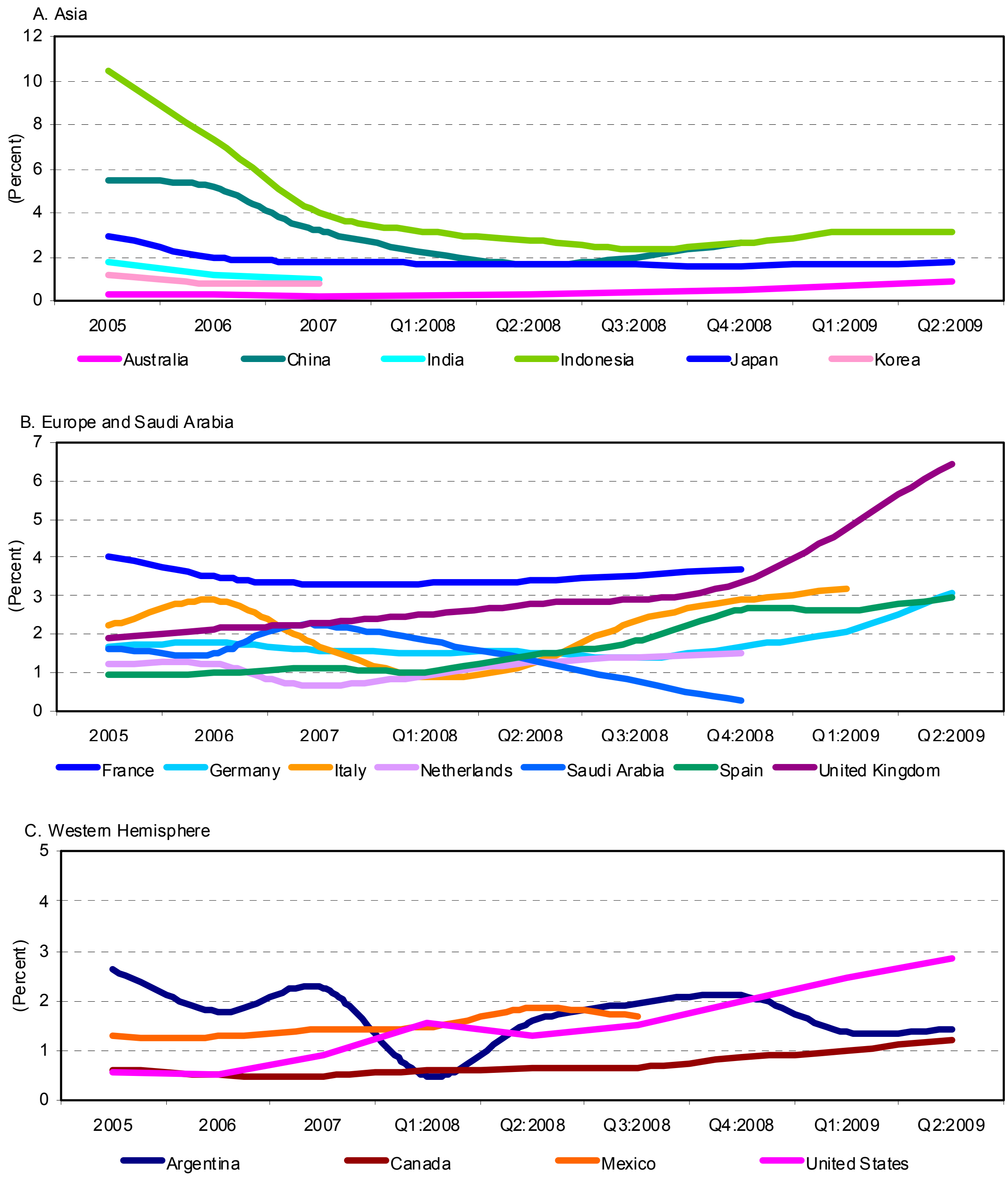
Source: Bloomberg and IMF staff estimates

Figure 5. G-20: Bank Stock, Bond, and CDS Indices, 01/01/2007-06/30/2009



Source: Datastream and Merrill Lynch

Figure 6. G20: Non-Performing Assets, 2005-Q2:2009 1/



Source: Bloomberg

1/ Weighted average of the 5 largest banks reporting quartely/semi-annual/annual results.

Statistical Appendix Table 1. Steps Taken to Address Priorities in Response to the Crisis

Country	International Coordination Measures	Depositor Protection	Other Bank Debt Guarantee Programs	Financial Institution Condition Diagnosis -- Exercise	Restructuring and Recapitalization Program for Undercapitalized Banks	Asset Management Strategy 6/
Africa						
South Africa	Announced	Unannounced	Unannounced	Unannounced	Unannounced	Unannounced
Asia						
Australia	Announced	Underway	Underway	Unannounced	Unannounced	Underway
China	Announced	Unannounced	Unannounced	Unannounced	Unannounced	Unannounced
Indonesia	Announced	Underway	Unannounced	Unannounced	Unannounced	Unannounced
India	Announced	Unannounced	Unannounced	Unannounced	Unannounced	Unannounced
Japan	Announced	Unannounced	Unannounced	Unannounced	Underway	Underway
Korea	Announced	Underway	Underway	Unannounced	Underway	Underway 2/
Europe						
France	Underway 1/	Unannounced	Underway	Announced 4/	Underway	Unannounced
Germany	Underway 1/	Underway	Underway	Announced 4/	Underway	Underway
Italy	Underway 1/	Unannounced	Underway	Announced 4/	Underway	Unannounced
Netherlands	Underway 1/	Underway	Underway	Announced 4/	Underway	Underway
Russia	Announced	Underway	Underway	Unannounced	Underway	Unannounced
Spain	Underway 1/	Underway	Underway	Announced 4/	Underway 2/	Underway 2/
Turkey	Announced	Unannounced	Unannounced	Unannounced	Unannounced	Unannounced
United Kingdom	Underway 1/	Underway	Underway	Completed 3/	Underway	Underway
Middle East						
Saudi Arabia	Announced	Unannounced	Unannounced	Unannounced	Unannounced	Unannounced
Western Hemisphere						
Argentina	Announced	Unannounced	Unannounced	Unannounced	Unannounced	Unannounced
Brazil	Announced	Unannounced	Unannounced	Unannounced	Unannounced	Unannounced
Canada	Announced	Unannounced	Underway 2/	Unannounced	Unannounced	Underway
Mexico	Announced	Unannounced	Underway	Unannounced	Unannounced	Unannounced
United States	Announced	Underway	Underway	Completed 5/	Underway	Underway 2/

1/ The EU Commission has issued guidelines for State aid in favor of banks in context of the current global financial crisis. These address guarantees, recapitalization, the treatment of impaired assets and restructuring of banks. The U.K. measures are consistent with the EU Guidelines.
2/ Program(s) created but not all have been utilized by banks to date.
3/ No Publication -- Have not or do not intend to publish results of diagnosis.
4/ The EU has announced, in principle, that members would conduct stress testing, but, it is at the discretion of national authorities under direction of CEBS and carried out to assess the EU financial system's potential resilience to shocks.
5/ Published -- Published results of diagnosis either in aggregate or for individual institutions.
6/ Includes plans covering distressed and non-distressed assets as well as asset guarantee programs.

Explanation of terms:
Announced -- Countries have announced a strategy.
Completed --Countries have announced and completed implementation of strategy.
Underway -- Countries have started implementing strategy.
Unannounced -- Countries have not made any special announcements regarding special actions taken during the current financial crisis.

Explanation of Calculations:

The methodology used to calculate numbers used in the Tables 1-3 is as follows.

Exchange rate: Monthly exchange rates for each currency were averaged over the period October 2008– June 2009 and used to convert local currency amounts into U.S. dollars. The exchange rates were sourced from the IMF's *International Finance Statistics.*

GDP: GDP figures for each country were sourced from IMF's *World Economic Outlook* (WEO) and the *Country Economic and Information Center* (for China). GDP data was calculated as the sum of Q2 2008 through Q2 2009. For countries where nominal GDP data was unavailable from WEO, real GDP and the GDP deflator were used to compute nominal GDP. The exchange rate to calculate the U.S. dollar GDP was calculated as the average from July 2008 through September 2009.