EBS/09/29

STRICTLY CONFIDENTIAL
RECLASSIFIED FOR OFFICIAL USE ONLY FROM 3/18/09

March 10, 2009

To: Members of the Executive Board

From: The Acting Secretary

Subject: **Group of Twenty—Note by the Staff of the International Monetary Fund on Stocktaking of the G-20 Responses to the Global Banking Crisis**

Attached for the **information** of Executive Directors is a note on stocktaking of G-20 responses to the global banking crisis submitted to the Group of Twenty (G-20) ahead of the meeting of Ministers and Central Bank Governors in London, U.K. on March 13–14, 2009.

Questions on the surveillance note may be referred to Mr. Hoelscher (ext. 37046) and Mr. Johnston (ext. 38980) in MCM.

This paper will be published on the Fund's external website following the G-20 Ministerial meeting.

This document will shortly be posted on the secure page of the extranet, a website for Executive Directors and member country authorities.

Att: (1)

STRICTLY CONFIDENTIAL
RECLASSIFIED FOR OFFICIAL USE ONLY FROM 3/18/09

Group of Twenty

Meeting of the Ministers and Central Bank Governors
March 13–14, 2009
London, U.K.

Note by the Staff of the International Monetary Fund
on
STOCKTAKING OF THE G-20 RESPONSES TO THE GLOBAL BANKING CRISIS

Executive Summary

National responses to banking sector weaknesses have prevented creditor panic but measures are needed to restore financial stability. Countries' immediate priority has been on addressing liquidity needs of the system and forestalling widespread panic. As a result, bank restructuring responded to market pressures rather than to a full diagnosis of the underlying soundness of institutions.

Some of the key limitations of the policy response to date include:

- **Creditor protection may not be adequate if economic conditions continue to deteriorate**. Following the failure of Lehman Brothers in September 2008, G-20 countries responded with targeted, rather than comprehensive, creditor protection. Such containment strategies may not be robust to a deepening crisis.
- **Capital injection programs have been ad hoc**. As the number of troubled financial institutions rose sharply, national authorities often responded to market pressures for recapitalization without a well-defined set of criteria, diagnosis, or a coherent restructuring or rehabilitation program.
- **Asset management policies are only slowing being put in place**. Institutional arrangements for dealing with bad assets are only just emerging (e.g., the U.S. public-private investment fund and the U.K. asset purchase scheme), and difficult operational issues related to the valuation and disposal of these assets still need to be addressed.

Critical aspects of crisis management frameworks need to be strengthened in the context of a comprehensive and internationally coordinated strategy that does not shrink from government takeovers of nonviable institutions. Such a program would include the following elements:

- A framework of international coordination of restructuring and recapitalization policies.
- International cooperation on a framework for valuing and disposing of toxic assets.
- Quick action to inspect major financial institutions to determine their financial health and remediate as necessary.
- Institutional frameworks for public holdings of banks that ensure that banks that have been recapitalized operate on sound business principles and without undue government influence.
- An effective communications strategy explaining the overall approach and objectives.

Many G-20 members have yet to feel the full brunt of the crisis, and G-20 members should take immediate action to contain further deterioration. Even in countries where banking sectors still appear resilient, the deepening global financial crisis is likely to imply greater stresses, and early action to assess vulnerabilities based on realistic assessments of asset valuations and to put in place a well-defined and clearly communicated strategy for dealing with weak institutions is critical.

I. INTRODUCTION

1. **The current crisis is deeper and wider than previous post-war crises**. The crisis has shown an exceptional interconnectedness of markets and institutions, reflecting financial globalization and massive cross-border capital flows during the past decade. Rising delinquencies in the U.S. subprime market and the failure of several major financial institutions have shocked world financial markets and led to a global economic slowdown. This crisis has also been unusual in that the build-up of private sector indebtedness occurred over a longer period, especially in the United States, and was fostered by the development of new (and poorly understood) asset-backed securities.

2. **Countries did not fully coordinate national policies in the face of the global crisis**.[1] National policies to address the immediate liquidity needs of domestic financial institutions have forestalled widespread panic and deposit runs. Similarly, bank restructuring measures responded to events rather than being developed as part of a forward-looking strategy. Global coordination of these actions could have strengthened their effectiveness, both over time and across countries.

3. **This paper provides a preliminary assessment of the policy responses taken by the G-20 countries through the first two months of 2009**. Because such policies are evolving quickly, any assessment is necessarily preliminary, but this paper recommends a more comprehensive, coordinated, and consistent approach to addressing the crisis. In fact, the merit of this recommendation is recognized by many countries, which are already adapting their policy stances.

II. THE LESSONS FROM PAST CRISES: BASIC PRINCIPLES OF CRISIS MANAGEMENT

4. **Past experience has illustrated that in their early stages, the depth of crises is often underestimated and initial responses can be incomplete and ad hoc**. This response often stems from inadequate loss recognition, regulatory forbearance, and a diagnosis of the soundness of the financial system based on assumptions of a mild economic downturn. This lack of information and a tendency to underestimate the magnitude of the problem can lead to an institution-by-institution approach that only addresses the symptoms of the financial distress, while balance sheets and the real economy continue to deteriorate in response to the underlying problems.

---

[1] The stocktaking surveyed crisis responsive measures of the 21 signatories of the November 15 G-20 Leaders Declaration that included Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Netherlands, Russia, Saudi Arabia, South Africa, Spain, Turkey, the United Kingdom, and the United States.

5. **This experience underscores the need for system-wide and comprehensive resolution measures to deal with systemic crises**. While specific measures may vary, reflecting differences in the institutional, legal and regulatory environment of each country, successful strategies must deal with the root causes of the crisis, typically carried out in three interrelated phases: [2]

- **Containment**: Creditor runs by both depositors and other creditors must be halted as adjustment policies cannot be implemented in periods of collapsing creditor confidence.
- **Restructuring and resolution**: Restructuring the financial system requires loss identification and recognition, a diagnosis of banks' viability, and operational restructuring of weak but viable banks.
- **Asset management**: Debt restructuring and management of distressed assets can begin once the financial position of the banks is understood. This restructuring and management can take place at the firm level or through a centralized asset management function.

III. The Policy Response to the Current Crisis—A Stocktaking

6. **Initial policy measures were reactive, responding to the specific needs of individual institutions** (Table 1). In part, this approach reflected an assumption that the problems were national in scope rather than global and critical uncertainties about whether the crisis reflected liquidity or solvency problems in banks, the valuation of complex structured products, and the real impact of the collapsing asset price bubble.

7. **Communications concerning policy measures were uneven and (at times) inadequate among the G-20**. Some countries sought to be transparent and explained in a timely manner their actions, using their agencies' websites to post press releases and formal announcements describing actions taken. In many cases, however, the crisis response was unclear and failed to restore confidence, with information regarding decisions covered mainly in local news reports that were conflicting at times.[3]

---

[2] 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."

[3] For example, the majority of countries that introduced new liquidity measures communicated their actions on the central bank website through official press releases. However, efforts to disclose information related to recapitalization plans, asset purchase plans or other guarantee facilities were often weaker. Also, in several cases, the press releases did not appear in English and there was no "internationally friendly" summary.

Table 1. Overview of Policy Measures

G-20 Countries—Spain and Netherlands

	Containment					Resolution					
	Deposit Insurance		Debt Guarantees		Liquidity	Recapitalization			Asset Management		
	No Change	Establish, Increase or Expand	Wholesale borrowing	Amount Committed (bn of US$)	New Measures Introduced	Capital Plans Established [3/]	Capital Committed (bn of US$)	Capital Injected (bn of US$)	Asset Purchase Plans	Amount Committed (bn of US$)	Loan Guarantees
Argentina	√										
Australia		√	√	open-ended	√				√	5.2	
Brazil	√				√				√	3.8	
Canada	√		√	open-ended	√				√	59.6	
China	√				√	1/		19.2			
France	√		√	402		√	50.3	17.0			√
Germany		√	√	503		√	100.5	26.6	√	6.3	√
India	√				√						
Indonesia		√			√						
Italy	√ [4/]		√	open-ended	√	√	25.1				√
Japan	√				√	√	120		√	27.6	
Mexico	√		√	3	√						
Netherlands		√	√	251	√	√	25.1	22.3			
Russia		√	√	open-ended	√	√	26.6	20.3	√	6	
Saudi Arabia		√	√	open-ended	√	1/		2.7			
South Africa	√										
Spain		√	√	126		5/			√	62.8	√
South Korea	√		√	open-ended	√	√	15.5	2.3	√	3.8	
Turkey	√										
United Kingdom		√	√	355	√	√	71	52.6	√	71	√
United States		√	√	open-ended	√	√	750	236.0	√ [2/]	1100	√
Total							**1,184**	**399**		**1,346**	

Source: Various government announcements and information on official websites. Exchange rates as of 2/23/09.

1/ While China did not establish a capital plan, the government recapitalized public state enterprises: Agricultural Bank of China, China Construction Bank, Bank of China, and Industrial and Commercial Bank of China. Saudi Arabia did not establish a plan.

2/ Funds committed under private/public investment fund ranges between US$500 billion and US$1 trillion, and funds committed under GSE/MBS purchases = US$6 billion.

3/ All countries have indicated that the capital injections will be available to assist sound banks except France, which has indicated that its plan will assist only troubled banks. Italy has indicated that both sound and troubled banks will be covered.

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

5/ While Spain did not commit a specified amount for capital assistance, the government announced it would buy shares in banks, if needed.

Containment of the crisis

8. **The September 2008 failure of Lehman Brothers was taken as a signal in the markets that the rules of the game were changing**. Unlike the treatment of earlier failures—Northern Rock, Countrywide, IndyMac, and Bears Stearns—the closure of Lehman imposed significant losses on creditors. The result was a marked deterioration in market sentiment and concerns among most G-20 authorities about contagion even to strong banks. This led authorities to strengthen their creditor protection programs.

9. **In the light of the failure of Lehman, G-20 countries typically responded with selective rather than comprehensive creditor protection schemes (Table 2)**. This response reflected the absence of immediate pressures from creditor runs, which permitted countries to use a combination of measures, including increased deposit insurance protection, full guarantees to selected sectors, and, as funding difficulties merged, guarantees of bank debt instruments.

Table 2. Creditor Guarantees

	Any change in deposit insurance	Wholesale borrowing guaranteed	Both	Date of first guarantee
United States	√	√	√	3-Oct-08
Germany	√	√	√	6-Oct-08
Spain	√	√	√	7-Oct-08
United Kingdom	√	√	√	7-Oct-08
Netherlands	√	√	√	7-Oct-08
Australia	√	√	√	12-Oct-08
Italy	√ /1	√	√	13-Oct-08
France		√		19-Oct-08
South Korea		√		19-Oct-08
Mexico		√		20-Oct-08
Russia	√	√	√	21-Oct-08
Canada		√		23-Oct-08
Indonesia	√			23-Oct-08

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

- **The most frequently used containment measure was an increase in debt guarantees for banks**. By October 2008, 12 countries provided some form of wholesale debt guarantee (Australia, Canada, France, Germany, Italy, Mexico, the Netherlands, Russia, Korea, Spain, the United Kingdom, and the United States) and 8 countries guaranteed interbank liabilities (France, Germany, Italy, Russia, the Netherlands, Saudi Arabia, the United States and the United Kingdom). Most of these guarantees were extended in the second half of October, following the collapse of Lehman.

- **Only limited actions were adopted by the G-20 countries to maintain depositor confidence**. Most countries (12 countries of the 21 reviewed) left deposit insurance levels unchanged. While the European Union authorized an increase in such coverage, most of the European countries in the G-20 already had protection levels at or above the enhanced level (France, Italy, and Germany). Within the European Union, the Netherlands and Spain increased the level of deposit insurance and Germany expanded coverage to guarantee all household deposits. Outside the European Union, five countries increased depositor protection (Indonesia, Russia, Saudi Arabia, the United Kingdom and the United States). Australia for the first time adopted a deposit insurance system.

- **Measures to enhance market liquidity were adopted by eight G-20 countries**. Most G-20 countries deployed a number of tools to provide additional liquidity to the markets. Actions taken included lowering reserve requirements (eight countries: Argentina, China, India, Russia, Saudi Arabia, Brazil, Indonesia, and Turkey); establishing new swap facilities (nine countries: Australia, Brazil, Canada, China, Japan, Mexico, Korea, U.K., and U.S.); and easing access to lender of resort facilities (Russia, U.K., and the U.S.).

- **Eight countries did not adopt additional measures to protect creditors**. Depositor confidence and bank funding mechanisms were considered sufficiently strong that no immediate policy response was necessary. In some cases, countries considered their existing safety nets to be adequate to address any problems.

10. **Despite the wide variation in measures taken, creditor confidence has been maintained and depositor runs avoided**. Before the failure of Lehman, creditors' confidence in the stability of the system had been strong and individual failures were attributed to narrow issues arising from the subprime market. Subsequent to Lehman's failure, authorities had to take actions to reassure creditors that the governments would not allow a collapse of the financial system. For example, the United States, in rapid succession, protected primary dealers and brokers (March), AIG (September), money market mutual funds (September), unsecured debt (October), commercial paper (October) asset-backed securities (November), Citi (November), and Bank of America (January).

Bank recapitalization

11. **During 2008, banks in many G-20 countries came under severe funding pressures, leading to a series of bank interventions and resolutions**. The resolution strategies were bank-specific, reflecting the belief that the financial system remained fundamentally solvent.

12. **Pressures intensified in the first half of 2008**. In January, the U.K. authorities nationalized Northern Rock, following almost six months of providing liquidity and seeking merger partners. Funding pressures in the United States let to the intervention and resolution of three major U.S. institutions.[4]

13. **In the final months of 2008, the pace of bank intervention and resolution sharply accelerated**. Triggered by the September failure of Lehman Brothers, market conditions sharply tightened for bank funding. In the second half of September, 10 large financial institutions required public intervention, followed by another 15 in October. Because the problems in each institution were not considered part of a systemic collapse, however, the authorities sought solutions on a bank-by-bank basis. In September, the U.K. authorities provided liquidity and waived competition rules to arrange for the merger of HBOS with Lloyds and then nationalized Bradford and Bingley. The U.S. authorities closed Lehman Brothers and Washington Mutual, arranged the sale of both Merrill Lynch and Wachovia, and took a significant ownership share of the insurance company AIG. Luxembourg, Belgium, and the Netherlands split up and recapitalized the regional bank, Fortis. Pressures continued in October with the collapse of the three Icelandic banks and capital support to three large U.K. banks (RBS, Lloyds, TSB) and six French banks. In November, Citi required a combination of guarantees and additional capital support from the United States.

14. **As of February 2009, nine countries directly injected public funds into banks**. Capital injections have amounted to approximately US$400 billion with the United States injecting by far the largest amount—almost two-thirds of the total—followed by the United Kingdom (Table 3). These injections were not based on a comprehensive assessment of capital needs nor on and assessment of the viability of the recipient financial institutions. Rather, they were triggered by a combination of funding needs, deteriorating market perceptions, and a desire to ensure that bank capital levels were considered adequate by markets to absorb future losses.

15. **Most of the capital injections occurred using preferred shares**. This appeared to reflect hope that bank management would be able to reverse their banks' deterioration, coupled with a concern regarding the market reaction from taking on significant (or majority) ownership of institutions, and a view that the yield attached to preferred shares would be more palatable given fiscal constraints (Table 4).[5] Direct ownership—the purchase of ordinary shares—was used in fewer than 10 percent of the cases (selected cases in Germany,

---

[4] Countrywide and Bear Stearns were acquired by other institutions and IndyMac was converted to a bridge bank

[5] Preferred shares a do not give usually the investor voting rights. If investors want to have a say in the operations of the institution, they need ordinary shares. Some public sector recapitalization programs initially inject convertible preferred shares that convert to ordinary shares under predetermined conditions.

the United Kingdom, and the United States). Less common were the provision of silent participations (Germany) and hybrid subordinated debt (France.)

Table 3. Capital Injections

Country	US$ billion
China	19.2
France	17.0
Germany	26.6
Netherlands	22.3
Russia	20.3
Saudi Arabia	2.7
South Korea	2.3
United Kingdom	52.6
United States	236.0
Total	**399.0**

Table 4. Forms of Capitalization 1/

Injection	Amount	Percent
Common	30.7	7.7
Preferred Shares	307.0	77.0
Subordinated Debt	13.2	3.3
Other/Unspecified	48.0	12.0
Total	**399**	**100**

Source: Various government announcements and information on official websites.

1/ Exchange rates as of 2/23/09

16. **Few conditions were initially placed on banks receiving public resources**. Nine countries placed some form of requirements on banks, including some form of directed lending or restrictions on dividends (France, Germany, Italy, Japan, Russia, Saudi Arabia, Korea, the United Kingdom, and the United States). Only one country (Italy) required the presentation of a restructuring plan. As the programs have evolved, however, capital support plans are increasingly including a range of limitations and conditions that institutions need to meet to access to government capital (Table 5).

Table 5. Conditions to Use Public Funds

	Dividends	Salary Restrictions	Lending Rules 1/	Code of Ethics	Board Membership
France		√	√	√	
Germany	√	√	√		
Italy	√		√	√	
Japan			√		
Netherlands		√			√
Russia			√		
Saudi Arabia			√		
South Korea			√		
United Kingdom	√	√	√		√
United States	√	√	√		

Source: Various government announcements and information on official websites.

1/ Governments have announced that funds be directed toward domestic economies to increase lending in mortgage markets, SMEs, and households in general.

17. **About half of the G-20 countries now have programs that can provide capital quickly to banks when needed**. Nine countries established direct capital support plans (France, Germany, Italy, Japan, the Netherlands Russia, South Korea, the United Kingdom, and the United States). Most of these plans envision provision of capital support to sound banks.[6]

- Some governments established conditions for accessing such programs. For example, some programs restricted dividends, executive pay, and bonuses, and established codes of ethics. Italy required a restructuring plan and government priority for dividends, Germany placed limits on executive compensation and suspension of dividends, and the United States placed restrictions on dividends and executive salaries.

- Some governments announced that these public funds should be directed toward the domestic economies particularly to increase lending in mortgage markets, small and medium sized enterprise sectors, and households in general. For example, the recently announced Financial Stability Plan in the United States, "comes with conditions to help ensure that every dollar of assistance is used to generate a level of lending

[6] However, the capital plan for France allowed capital injections to troubled banks and Italy allowed capital injections to both sound and troubled banks.

greater than what would have been possible in the absence of government support." Similar actions are being taken in France, Italy, and the United Kingdom.[7]

Asset management

18. **Asset management policies for the purchase of toxic assets have evolved slowly**. Reflecting the difficulties in pricing structured products, only two countries authorized the purchase of "toxic assets"—Germany and the United States (Table 6). Germany was the first G-20 country to commit to using public funds to purchase risky assets (Euro 70 billion). In October 2008, the U.S. Troubled Asset Relief Program (TARP) was also envisioned as such a program but the complexities of valuing toxic assets led the authorities to shift to a Capital Assistance Program (CAP). In February of 2009, the U.S. announced its intention to create a $500 billion asset purchase program, the Private-Public Investment Fund to manage such assets purchased from banks.[8]

19. **Eight countries have also announced programs to purchase a wide range of higher-quality assets**. Governments will purchase both high quality structured products and loan portfolios (Table 6). In January 2009, the U.K. announced a £50 billion asset purchase program to purchase high quality assets and established the Bank of England Asset Purchase Facility Fund Limited, a wholly-owned subsidiary of the Bank.[9] In addition, Australia authorized the purchase of performing RMBS, Japan introduced a program to purchase investment securities of banks, and Canada authorized the purchase of insured mortgage loans via auctions.

20. **Asset guarantee programs have also been introduced**. Six countries have committed to guarantee certain loan portfolios held by their banks: four EU countries (France, Germany, Italy, and Spain), the United States, and the United Kingdom (see Table 6). Most countries appear to have issued general guarantees noting that new lending operations (Spain), potential defaults (Germany), or loans issued by local banks and branches (Italy) will be covered. In addition, some countries (Brazil, France, Japan, Russia, and the United States) have introduced new or expanded existing programs to provide direct support to borrowers in an effort to limit deterioration in banks' loan portfolio.

---

[7] Outside the G-20, Switzerland is allowing domestic lending to be excluded from its leverage ratio for UBS and Credit Suisse. The Swiss Banking Commission has indicated that domestic lending activities are important to the Swiss economy.

[8] While details have yet to be announced, the design will include a market mechanism to value assets.

[9] This asset protection scheme will protect a portion of the banks' balance sheets, so that the healthier core of the bank will be "untainted" and able to proceed with normal lending activities. The 'first loss,' incurred on future losses will remain with banks and the protection provided by the government will cover 90 percent of the remaining loss.

Table 6. Summary of Asset Plans Established 1/

	Quality of Assets Purchased		Amount Committed	Type of Asset Purchased						Loans Guaranteed
				Loans	Structured Products		Other	Mixture	Unclear	
	Toxic	High quality	In bns of US$	Mortgage loans	Mortgage securities	Other securities	Unsold houses	Mixture	Unclear	
Australia		√	5.2		√					
Brazil		√	3.8		√	√		√		
Canada		√	59.6	√						
France										√
Germany	√		6.3						√	√
Italy										√
Japan		√	27.6			√				
Russia		√	6.0			√				
Spain		√	62.8						√	√
South Korea		√ *	3.8				√			
United Kingdom		√	71.0	√	√	√		√		√
United States	√ 2/	√	1100	√	√			√		√
Total			**1346.1**							

1/ Exchange rates as of 2/23/09.
2/ South Korea will purchase unsold houses, difficult to categorize as toxic or not.
3/ Funds committed under private/public investment fund ranges between US$500 billion and US$1 trillion, and funds committed under GSE/MBS purchases = US$6 billion.

IV. Have Measures Been Successful?

A. The Market Response

21. **While it is still too early to judge effectiveness, the measures described above have so far had only a limited impact on the financial position of banks**. Central bank intervention has successfully addressed pressures on bank liquidity, but the underlying financial position of financial institutions, particularly the large complex financial institutions (LCFIs), remains precarious. LCFI profitability and earnings have deteriorated and no major improvement is envisaged by market analysts. Moreover, although Tier 1 ratios have been boosted through the capital injections, tangible common equity (TCE) remains at a critical level for most institutions. Asset quality is weakening, and credit spreads for LCFIs have remained wide. Finally, measures have not stemmed the market-driven de-leveraging process, and lending surveys point to a continued deterioration for the next year in the United States, Europe, Canada and Japan.

22. **While national policies have eased funding pressures, market confidence remains weak**. Government guarantees for senior bank debt have relieved some of the funding pressures, but these actions have not averted the collapse in bank stock prices, and a sharp increase in the cost of capital. In broader credit markets, the situation remains difficult and highly dependent on official support. While highly rated issuers may have access to central bank facilities, lower rated issuers are credit-constrained. Moreover, structured

product markets have remained largely frozen except for agency guaranteed issues and support operations by central banks.

B. The Policy Response

23. **Policies have contained creditor flight but coverage has been uneven**. The containment measures have responded to events and may not be sufficiently robust to accommodate a deepening crisis. As the crisis evolves, creditors may become increasingly worried about the solvency of the financial system. To this end, countries need to prepare deeper and more comprehensive strategies.

24. **National policies have not yet grappled with the implications of the evolving global crisis**. Different approaches open the possibility of arbitrage and liquidity flows from relatively less protected to more protected jurisdictions. A home country bias in approaches risks disrupting cross border flows. This cross-border nature of financial systems and institutions makes it important to coordinate crisis containment measures.

25. **Even on a national basis, resolution strategies for the banking problems have taken place on a case-by-case basis, rather than as part of an overall assessment of the distress in the financial system**. Capital injections were often not accompanied by an assessment of bank viability or by restructuring plans. Moreover, the injection of preferred shares in distressed institutions, while giving the authorities some upside benefit should the institutions recover, did not give governments a way to control or influence the bank's use of public money.

26. **To mitigate the risk of an intensification of the crisis, G-20 members should take immediate action to contain further banking sector deterioration**. Specifically, most national programs contain no systematic assessment of bank viability or restructuring plan. Such an assessment would include an evaluation of the losses in the banks and also require an agreed-on restructuring plan designed to return viable banks to profitability. Such a plan would have to include elements ensuring that bank restructuring is adequate and that future capital injections by the public sector would not be required. The absence of credible valuations of distressed assets, particularly the structured products, together with the projections of expected losses from the deepening global economic slowdown remain unaddressed. Moreover, programs generally lack some conditionality and accountability for the use of public money.

V. Recommendations

27. **The need for reinforcing stabilization policies is evident**. The continued weaknesses and disruption in financial markets illustrates a lack of confidence in the viability of the major banks, while the deterioration in global economic conditions clearly suggests even more pressure on balance sheets has to be expected. The recent steps by the United States to subject banks to uniform stress tests, capital assistance, and restructuring,

with a program for removing distressed assets are a welcome step. The U.K. program for providing guarantees and removing assets from banks' balance sheets is also an important move in the right direction.

28. **Action is still needed, however, to begin the process of restructuring banking systems to avoid even more serious economic downturn**. Unless banks' balance sheets are quickly cleansed and banks restructured, more serious outcomes can easily be envisaged. This further downside risk is exacerbated by both the size and complexity of the institutions and the complexity of the financial instruments.

29. **A key priority should be the development and early implementation of a comprehensive crisis management strategy that does not shrink from government takeovers of nonviable institutions**. Such a strategy must include an evaluation of the viability of financial institutions, a plan to develop and implement bank restructuring measures, appropriate support for the creditors of intervened institutions to maintain confidence in the financial system, and the appropriate institutional framework. Such a program would include the following elements:

- ***The cross-border nature of crisis containment must be directly addressed***. Mechanisms for coordinating restructuring policies are needed if the resolution of cross-border institutions can be accomplished without creating arbitrage opportunities. Agreement on methodologies for valuing toxic assets, diagnosing the viability of institutions. and restructuring policies is particularly important in regions where cross-border banks are significant. New mechanisms may be needed to share experiences and coordinate actions.

- ***A comprehensive diagnosis of the financial institution soundness and capitalization needs***. Losses in the banking portfolio would be identified based on a forward-looking evaluation. Such a diagnosis should be based on a consistent methodology for valuing hard-to-value assets and sufficiently stressed assumptions concerning the future growth of economic sectors. Once completed, institutions must be categorized as sound, undercapitalized but viable, or insolvent.

- ***A restructuring strategy must be developed for undercapitalized banks, based on the diagnosis***. A strategy for each bank deemed to be viable and facing capital deficiencies should be agreed on between supervisors and shareholders. Such strategy should include a monitorable, time-based restructuring plan to bring bank capital to minimum acceptable levels.

- **Toxic assets must be neutralized** A methodology on valuing toxic assets must be established.[10] Once valued, such assets must be removed from banks' balance sheets or given government guarantees that put a floor on future losses. Removal of such assets will provide clarity concerning bank balance sheets while guarantees may entail a smaller upfront cash outlay.

- **A public sector recapitalization program should be established with clear rules governing the conversion of preferred shares into ordinary shares**. Private sources of capital are scarce and when shareholders are unable to meet prudential requirements, banks should have access to public recapitalization programs. The program must include clearly defined conditions and restrictions for participation in the program.

- **Recapitalization must be accompanied by appropriate public oversight**. This will need to include well-established conditions for the conversion of preferred shares to ordinary shares if a bank fails to meet the agreed-on monitorable targets specified in the restructuring plan.

- ***The institutional framework for public holdings of banks must be established***. If government ownership becomes substantial, an institutional framework, which is independent of inappropriate political influence, should be established to manage government shares. A strategy for resolving each bank must be developed including a reasonable timeline for returning viable banks to private ownership. A bank holding company, agency or supervisory unit responsible for monitoring the implementation of restructuring plans and monitoring the health of publicly owned banks should be considered.[11]

- ***Nonviable financial institutions need to be resolved promptly***. Such resolution may entail restructuring, downsizing and possibly closure in a way that does not jeopardize system-wide financial stability. If creditors are fully protected, the banking authorities will have greater options to seek merger with viable institutions, create new, viable banks, or sell assets and liabilities to viable banks. If creditors are not protected, the imposition of losses on creditors must be undertaken with extreme caution.

---

[10] Authorities can use come combination of valuing them using current market indices or based on the net present value of future income streams. For cross border firms, however, the valuation methodology must be agreed on by all relevant regulatory bodies.

[11] A well-known example is the Bank Support Authority in Sweden established in 1993. The authority managed government support of four large nationalized banks. It conducted due diligence on NPLs to determine the size of recapitalization.

Box 1. Past and Current Crises—Stylized Facts

Historically, housing and credit booms fomented major crises, followed by severe unwinding, with lasting scars on the real economy.

Credit build up and crunch

Financial crises were often precipitated by a build-up of credit. A new IMF database[12] demonstrates that credit booms[13] took place in 27 percent of 20 large financial crises.[14] For these 20 crises, private credit to GDP expanded annually by 9.4 percent in the three years prior to the crisis. In the mature markets, financial crisis/stress episodes were preceded by an average 39 percent five-year cumulative increase in private credit-to-GDP ratio (see table). The build-ups were even larger in the major emerging market. Crises typically caused a severe unwinding, which took an average of 5.7 years for the mature economies. The peak-to-trough fall of private credit to GDP ratio was on average 38 percent.

A credit boom was also a major contributor to the current crisis. For example, the United Kingdom showed a 35 percent increase in bank credit-to-GDP ratio in the period leading up to the crisis; the recorded increase in bank credit to GDP in the United States was only 17 percent reflecting the fact that much of the increase occurred off balance sheet through securitized markets, and flow-of-funds data show a much larger build up of household liabilities. The unwinding has commenced and total credit to GDP in the advanced economies appears to be falling faster than in past crises.

Asset booms and bust

Credit booms were often closely linked to asset bubbles that were followed by a credit and asset price bust. The financial crises in mature markets were preceded by an average 90 percent cumulative rise in housing price in the five-years prior to the crisis, and followed by 24 percent peak-to-trough decline, which lasted for 4.5 years. Crises have also been associated with stock market bubbles, although these have been shorter and less severe than crises associated with a collapse in housing prices.[15]

Contagion

Crises were often associated with some degree of cross-border financial contagion, but no previous crisis has exhibited the current global synchronization. Current G-20 equity prices correlations have risen to around 0.9, roughly twice their norm. The current episode is also unusual in the degree of commonality of banking system problems.

Crisis outcome

Crises led to output loss and fiscal costs. The peak-to-trough decline in real GDP averaged 4 percent for the mature markets and took 1.7 years on average to reach the trough. The average fiscal cost averaged 4.9 percent of GDP.

---

[12] Luc Laeven and Fabien Valencia, 2008, “Systemic Banking Crisis: A New Database,” IMF Working Paper (WP/08/224).
[13] Defined as over 30 percent, three-year pre-crisis cumulative growth of credit over GDP ratio.
[14] Finland 1991, Norway 1991, Sweden 1991, Japan 1997 (Mature markets); Brazil 1, Brazil 2, Colombia, Colombia 2, Chile, Mexico, Czech, Russia, Turkey, Latvia, Lithuania, Bulgaria, Korea, Indonesia, Malaysia, Philippines, and Thailand (EMs).
[15] The link between equity price inflation and a financial crisis is far weaker than the housing price.

Build up and unfolding of financial crisis

Ex-ante Crisis severity -- initial imbalance and need for emergency liquidity

	Asset price build up		Credit build up 1/	Contagion	Size of	Liquidity
				Equity	affected	
	House prices 1/	Equity prices 2/	Credit/GDP(%)	Correlation3/	banks 4/	support 5/
Finland, Sep 1991	42.8	34.2	48.7	0.26	0.1	5.5
Sweden, Sep 1991	83.2	34.3	54.8	0.26	0.7	9.4
Norway, Sep 1991	95.8	108.8	67.6	0.26	0.4	6.2
Japan, Nov 1997	172.0	11.3	8.8	0.54	31.0	0.4
United Kingdom, early 1990s	112.2	25.6	44.2	0.52	6.9	-
United States, early 1990s	36.5	12.2	12.4	0.77	19.3	0.2
Korea, Aug 1997	-0.6	16.5	13	0.34	0.7	28.9
Thailand, Jul 1997	28.3	24.1	55.2	0.33	0.7	25.9
Indonesia, Nov 1997	-	35.1	26.3	0.54	0.3	53.8
Mexico, Dec 1994	-	77.5	135.2	0.23	0.5	67.6
Turkey, Nov 2000	-	10.3	2.8	0.64	0.2	22.2
Average - all	71.3	35.4	42.6	0.43	5.5	22.0
Average -MM	90.4	37.7	39.4	0.44	9.7	4.3
Average - EM	13.9	32.7	46.5	0.42	0.5	39.7
Current crisis						
United Kingdom	48.3	18.4	34.7	0.92	11.0	-
United States	72.3	26.4	17	0.92	18.6	6.1
Germany	0.7	38.8	-9.4	0.92	8.0	14.9
Switerland	14.0	26.7	11.9	0.92	0.5	5

Ex-post Crisis severity -- crisis outcome

	Asset price decline 6/		Credit crunch 6/	Output loss 7/	Fiscal cost for recap 8/	
	House prices	Equity prices	Credit/GDP		Gross	Net
Finland, Sep 1991	-22.9 (4.5)	-29.2 (0.7)	-41.8 (10)	-13.2 (3.3)	8.6	6.9
Sweden, Sep 1991	-20.2 (2)	-18.9 (0.5)	-41.1 (5.8)	-4.8 (2.8)	1.85	1.49
Norway, Sep 1991	-30.1 (5)	-27.6 (1.3)	-20.1 (3.3)	-0.1 (0.3)	2.61	0.61
Japan, Nov 1997	-54.6 (11)	-21.2 (0.5)	-49.8 (6.8)	-2.5 (1.3)	6.61	6.52
United Kingdom, early 1990s	-12.6 (3.8)	-8.6 (0.3)	-7.5 (2.8)	-2.6 (2)	--	--
United States, early 1990s	-2.8 (1)	-2.5 (0.2)	-23.4 (5.5)	-1.3 (0.5)	--	--
Korea, Aug 1997	-12.9 (1.3)	-40.1 (0.5)	- (-)	-8 (0.8)	19.3	15.8
Thailand, Jul 1997	-25.5 (1.8)	-41.7 (0.4)	-37.1 (4.3)	-14 (1.3)	18.8	18.8
Indonesia, Nov 1997	-	-44.6 (0.5)	-68.2 (2.8)	-16.7 (0.3)		
Mexico, Dec 1994	-	-43.5 (0.4)	-54.4 (2)	-8.5 (1)	3.8	2.5
Turkey, Nov 2000	-	-28.9 (0.2)	-38.1 (1.5)	-7.8 (1.3)	24.5	23.2
Average - all	-22.7 3.8	-27.9 (0.5)	-38.2 4.5	-7.2 (1.3)	10.8	9.5
Average -MM	-23.9 4.5	-18.0 (0.6)	-30.6 5.7	-4.1 (1.7)	4.9	3.9
Average - EM	-19.2 1.5	-39.76 (0.4)	-49.45 2.6	-11 (0.9)	16.6	15.1
Current crisis (change up to date)						
United Kingdom	-19.0 (1.3)	-37.7 (1.6)				
United States	-20.3 (2.5)	-38.2 (1.2)				
Germany	- (-)	-45.0 (1.2)				
Switerland	5.8 (-)	-42.2 (1.6)				

Sources: IMF databases (IFS, Lavean and Valencia (2008)), Haver Analytics, Bank of Finland

1/ 5 year cumulative change to the peak before the start of the crisis; for Japan and Norway the peak occurred substantially earlier than the crisis (6 year for Japan, 4 year for Norway)
2/ Trough-to-peak increase; the peaks associated with the crisis generally occur before the crisis date.
3/ Average correlation of G-20 equity price over 12 month rolling-forward window of monthly average stock price
4/ Percent, ratio of banking system private credit (in countries affected) to G-20 GDP
5/ Ratio of central bank credits to Deposit Monetary Banks and total bank deposits; maximum ratio within three years from the start of the crisis
6/ cumulative peak-to-trough decline; figures in parenthisis are years to reach the trough
7/ Peak-to-trough decline in seasonally adjusted quarterly real GDP levels; figures in parenthisis are years to reach the trough
8/ Percent; average annual fiscal cost over GDP during five years since the crisis