

The Unfolding Crisis

Implications for Financial Systems and Their Oversight¹

Introduction

The financial crisis is prompting a reassessment of certain principles and practices in financial sector policymaking, and could lead to important changes in the structure and oversight of financial systems worldwide.

The long period of abundant liquidity and low interest rates prior to the crisis led to a global search for yield and a general underpricing of risk by investors (see appendix 1 for an overview of the main causes of the crisis). Lending volumes increased substantially in many countries, due to a decline in lending standards and increased leverage, contributing to bubbles in asset prices and commodities.

In the United States, the crisis was shaped by particular characteristics of the US financial system such as a complex mortgage financing value chain with opaque securitization structures, a large 'shadow financial system' involving various poorly regulated intermediaries (investment banks, hedge funds, structured investment vehicles—SIVs) and instruments (credit default swaps), the important role played by government-sponsored enterprises (Fannie Mae and Freddie Mac), as well as a fragmented supervisory architecture.

Emerging countries have not developed the same complex financing structures as those in the US, but several countries have already suffered from severe

external imbalances, caused by fiscal imbalances and/or over-extended banking systems. These countries have become particularly vulnerable, as the crisis is transmitted through financial and trade channels. However, the specific channels of transmission may differ significantly across countries.

The crisis will have an impact on the formulation of financial sector policies and the design of regulatory frameworks in emerging countries. This may be due to several factors, including the direct knock-on effects of the crisis on emerging countries, changes to the 'rules of the game' introduced by standard-setting bodies (FSF, BCBS, IAIS, IASB, IOSCO, etc.), and demonstration effects related to the policy measures implemented by developed countries.

The important question here is whether there is still a consensus on the types of financial development policies and reforms that need to be pursued in developing economies.

This note represents an attempt to identify, classify and briefly describe the main financial sector-related policy issues that arise from the financial crisis; other policy dimensions that may be reassessed (e.g. monetary policy) are not covered.

The note does not go in depth on any of the identified issues: this will be addressed in separate, stand-alone notes. And as the crisis is still on-going, this note will be updated as new issues emerge.

¹ Prepared by the World Bank Financial Systems and Development Economics departments, with significant inputs from the Poverty Reduction and Economic Management department, and last updated on October 28, 2008.

The note is divided into three parts: crisis management, structure of financial systems, and financial sector policymaking. The first part consists of the reassessment of crisis management arrangements in light of recent experience. The second part addresses broader issues relating to the future structure of financial systems, while the third part discusses potential medium-term changes in the conduct of financial sector policy (including regulation and supervision) once the crisis has been contained.

Crisis Management

Crisis Preparedness

As recent events and our crisis simulation pilots have shown, there remain important weaknesses in crisis preparedness arrangements both within and across countries.

Issues to be addressed, particularly for those countries that have not recently gone through a crisis, include contingency planning, stress testing, development of protocols, legal powers of the authorities, communication with the public and the media, and coordination across agencies responsible for financial/macro policy and with key international players. Although these issues are not new, they have come to the fore once again.

Deposit Insurance/Guarantees on New Bank Debt

The US, European and other developed country governments have provided extensive assurances to bank depositors and creditors (and, in a few cases, non-bank financial institutions such as mutual funds) prompted by systemic stability and (in a few cases) competitive concerns. Some of these arrangements include blanket guarantees on deposits and guarantees on new debt issues. The scale of these arrangements has no historic parallel and constitutes a paradigm shift.

Some developed countries have announced that the guarantees on new debt issues will be extended for 18-36 months, but these arrangements may have to

be maintained until financial stability is consolidated and credit flows resume on sustained basis, which may take longer in some cases.

Some emerging countries are matching these arrangements in order to prevent capital outflows or a shift of deposits to state-owned banks, which are perceived to be safer. The state guarantee backing these arrangements may not be credible in countries where the state is already saddled with a large debt and the banking system is large.

The introduction of special arrangements by emerging countries may be inevitable, but policy-makers should be advised to proceed gradually. Thus, in addition to liquidity support, policy-makers may consider raising ceilings and eliminating co-insurance, before extending blanket guarantees on deposits and debt. For example, Hungary has introduced blanket guarantees, but other neighboring countries (e.g. Czech Republic, Poland, Slovakia) have not yet found it necessary to do so.

In order to address moral hazard and reduce the incentives for excessive borrowing, it is important to ensure that any guarantees are properly priced. The UK approach of charging 50 basis points for the new debt guarantees merits consideration. The guarantees should be introduced in conjunction with credible policy measures to clean up the banking system, and should be phased out as stability returns.

There is a continuum of policy measures to enhance confidence and stem the risk of bank runs and capital outflows, of which the introduction of capital controls should be considered as instruments of last resort. Some countries have also imposed deposit freezes in crises situations, but this measure may have long lasting negative effects on the domestic banking system, if it is not removed promptly and accompanied by a credible reform package. As illustrated in Figure 1, the freezing of deposits in Argentina in 2001 was one of the factors contributing to the poor deposit mobilization in the following years (as indicated by the declining ratio of bank deposits to GDP).

Some of the recent changes to the design of deposit insurance may become permanent. For example, regulators may find it hard to lower insurance ceilings to the levels prevailing before the reform. Several countries are also considering eliminating permanently the co-insurance component, because of the perception that it has not enhanced the incentives for ex-ante monitoring but has encouraged runs on troubled banks (illustrated by the case of Northern Rock in the UK).

The central question, however, is whether any safety net design will be credible after these arrangements are suspended. The lack of credibility and the associated moral hazard will impose a heavier burden on financial regulation and supervision. The discussion on narrow banking may be resuscitated, as in previous crisis episodes, although it is unlikely to gain prominence.

The crisis has also shown the need for much greater international policy coordination to avoid inefficient beggar thy neighbor outcomes (e.g. excessive subsidies in one country spilling over to other countries). An example of the potential competition between jurisdictions that might unintentionally result from such measures would be the decline in business of some offshore financial centers that are unable to match blanket guarantees.

Bank Restructuring and Asset Resolution Schemes

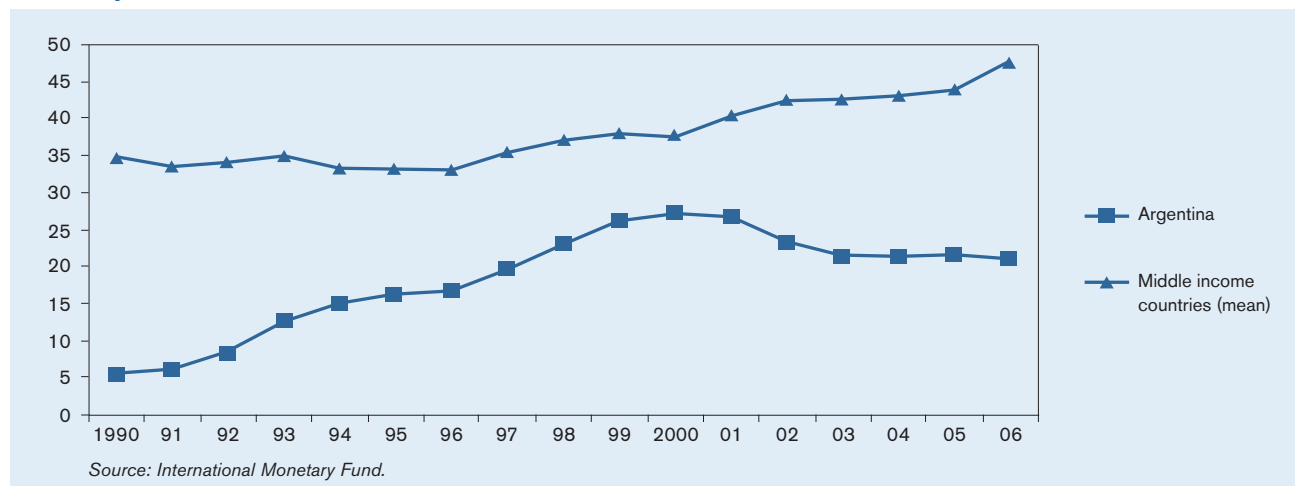
The US, UK, Switzerland, and other European countries have initiated programs to address bank illiquidity and insolvency. These programs involve a combination of sales of distressed and illiquid assets and equity injections by the government. There has been an increasing preference for the latter measure, in many cases through the issue of preferential shares.

These measures will result in substantial state participation in many banks in these countries. The impact on incentive structures, risk profiles, and performance will vary across countries and institutions. Government exit plans are generally defined in only a handful of programs. Governments will probably try to divest their shares as soon as the conditions allow, but this may take several years in many cases.

Participation in these programs involves conditions on management compensation and profit distribution. Some countries like the UK and the Netherlands have also introduced special governance arrangements during this period, including board representation, while others like the US intend to remain passive investors. This reflects different responses to the dilemma of penalizing existing shareholders and management versus avoiding political interference in bank operations. These experiences will be closely scrutinized by other countries.

FIGURE 1

Bank deposits as a % of GDP



Emerging countries facing a similar situation may want to signal from the outset that state participation in private banks would be transitory, and that state shares would be divested as soon as the conditions allow. It would be important to stress the objectives of the program, which are to restore not only stability but also efficiency in financial intermediation.

Policy-makers should be aware of the options for governing banks in the transitional period. Sweden created an autonomous agency operating under transparent rules (the Bank Support Authority). This is an attractive option, preferable to bank restructuring units inside the Ministry of Finance or the Central Bank, as it isolates the unit from political interference, and does not create a conflict with bank supervision. Some countries plan to use state banks to buy the shares of distressed private banks and re-sell them once the situation returns to normal. This option can be easily implemented, but may also have negative effects, as it can change significantly the structure of the banking system and distort competition.

Most large scale bank restructuring programs include two major components: asset sales/bank recapitalization and the resolution of problem assets. There are different approaches for resolving problem assets, independently of the approach adopted to restore bank solvency and liquidity. In some countries the government carved out the bad loans from balance sheets, but signed a management contract with the originating banks to recover the loans. Other countries have adopted decentralized good bank/bad bank approaches, which typically entail the transfer of bad assets to bank subsidiaries. In other countries the resolution of problem assets is handled by a central agency, which typically pools all the individual loans by type of debt, borrower, and sector, and re-sells them (or the underlying collateral) to investors.

The current crisis is unique, as most distressed assets are pools of several layers of securitized loans that may be difficult to unbundle and value (before they can be properly repackaged and resold). It is probable that unbundling may only be done effectively by a central

agency. If unbundling proves difficult, the alternative may involve keeping the pools of assets and waiting for the cash flows to stabilize, in order to determine their net present value. This may take time, as cash flows will deteriorate further in the near future.

Many emerging countries had to face large scale restructurings and workouts in the 1990s and are familiar with these issues. However, a review of the current arrangements and the experience of past crises resolutions could prove useful to several countries.

Structure of Financial Systems

Developed Countries

The US financial system is in many aspects unique due to the high share of capital market intermediaries and instruments. As illustrated in Tables 1 and 2, deposit money banks account for a relatively low share of financial system assets, the stocks of market instruments are significantly larger (including private bonds), and the ratio of claims on the private sector to deposits is much higher. Overall, these indicators reflect the much greater role played by large investment banks, institutional investors, and other financial institutions, as well the extensive use of securitization.

The structure of the US system may change significantly, entailing greater banking sector concentration and potentially less competition, a reduced emphasis on trading and investment banking activities (we are already witnessing a rebirth of the traditional boutique investment banking model), increased attention on retail banking, and a move towards a universal banking model. The secondary mortgage market will likely be significantly restructured (Fannie and Freddie will be shrunk in size and/or privatized), while the increased concentration of a few 'mega-banks' will likely lead to stricter oversight due to systemic risk concerns.

Several non-bank financial intermediaries, such as mortgage lenders, finance companies, structured vehicles, and hedge funds, have been badly impacted in this crisis and, in conjunction with their increased

regulation, will probably lose importance in relative terms.

As in previous instances, much of the US financial system's unique 'biodiversity' is likely to return in the form of new institutions and business models, although future developments will also depend on the scope for regulatory arbitrage and the nature and intrusiveness of the regulatory response.

The crisis in European financial systems is unlikely to change their basic structure, but European banks are generally more leveraged and will need to undergo a stronger adjustment of their balance sheets.

As mentioned before, it is unlikely that the US and European governments will retain permanent ownership of the banks under intervention, but the transition could prove long in some cases.

The identified problems and the regulatory response to structured finance will likely lead to a smaller securitization market, simpler structures and increased disclosures.

The boom in the credit derivatives market will slow down and institutional mechanisms will be adopted to introduce greater standardization of instruments (move from OTC markets to exchanges), increase

prudential and reporting requirements, and reduce counterparty risk (central clearinghouse).

Insurers writing credit risk will be the most affected by the financial crisis in the short term. Exposures to credit default swaps (CDS) risk are likely to be greatest to insurers based in major industrial economies. Insurance companies with extensive operations in securities lending programs are also likely to face liquidity problems.

The conventional insurance sector is more differentiated than banking and the impacts of the credit crisis are commensurately varied. The life insurance industry has been most affected with policyholders leaving unit-linked products and switching back to more conventional contracts requiring higher capital at the same time as asset portfolios are losing value. It is estimated that capital levels in the UK life insurance sector will decline by up to 15% in 2008. Recapitalization may be difficult in the current environment and there may be some consolidation in developed markets.

Emerging Countries

The basic structure of the financial system of most emerging countries should not change significantly, as banks still play a dominant role and capital markets are generally less developed (Tables 1 and 2).

TABLE 1

Total financial assets of banks and NBFIs, means by income group

	Deposit Money Bank Assets/GDP	Non-bank Financial Institution Assets/GDP	Total Financial Assets/GDP	Deposit Money Bank Assets/Total Finan- cial Assets	Total Loans/ Total Deposits
US	0.62	1.87	2.50	0.25	2.73
HIC	1.03	0.91	2.07	0.61	1.23
MIC	0.46	0.19	0.69	0.78	0.82
LIC	0.20	0.01	0.23	0.92	0.76

Note: Ratios are first calculated as averages from 2003 to 2006 at country level since we have unbalanced data for non-bank financial institutions. Mean ratios for income groups are simple average across countries.
Sources: IFS, FSAP, FIAP, OECD, AXCO, ICI, various national sources, Financial Development and Structure database by Beck, Demirgüç-Kunt and Levine.

TABLE 2

Outstanding stocks of financial instruments, means by income group

	Bank Deposits/ GDP	Stock Market Capitalization/ GDP	Public Bond Market Capitalization/ GDP	Private Bond Market Capitalization/ GDP	Bank Deposits/ Total Outstanding	Private Bond Market Capitalization/ Total Outstanding
US	0.67	1.39	0.47	1.19	0.18	0.32
HIC	0.85	0.99	0.44	0.48	0.33	0.16
MIC	0.44	0.40	0.32	0.10	0.31	0.06
LIC	0.19	0.20	–	0.00	–	0.00

Note: Ratios are first calculated as averages from 2003 to 2006 at country level since we have unbalanced data for some of the series. Mean ratios for income groups are simple average across countries.

Sources: IFS, WDI, BIS, Financial Development and Structure database by Beck, Demirgüç-Kunt and Levine.

However, it is important not to place all emerging countries in the same bucket. Those middle-income countries that are more financially integrated will bear more the direct fallout from this crisis, at least in its first stages.

There is a significant retrenchment in cross-border capital flows to home countries. Cross-border financing of domestic banks has declined substantially. Foreign investors have also withdrawn from fixed income, public equity, and private equity markets. Record outflows from emerging market equity and bond funds have been reported in the past couple of months. IPOs worth more than \$30 billion have been cancelled in emerging markets this year.

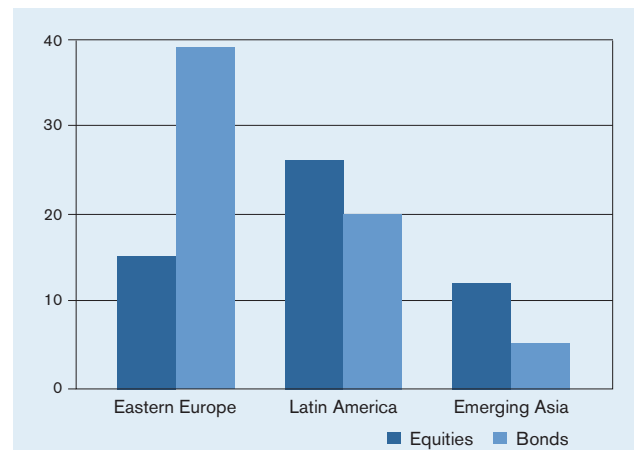
The process of deleveraging may prove painful in the countries where banks are over-extended and reliant on foreign borrowing. Some of these countries are already experiencing funding problems (e.g. Hungary has resorted to an emergency €5 billion credit from the European Central Bank). Banking systems in emerging countries may be further affected by price shocks (e.g. exchange and interest rates) and the slowdown of activity.

The current crisis may also have a negative impact on capital market development in emerging countries, as foreign investors had acquired a substantive participation in many markets (Figure 2) and were contributing to their development.

Small and medium enterprises and households will generally face more constrained access to finance due to bank deleveraging and the slowdown of capital market development. This will be aggravated in countries where governments and large corporates that were funded in international capital markets go back to domestic sources of finance and crowd out other borrowers.

Countries with larger domestic institutional investor bases will be better positioned to handle this effect (a point stressed in the latest Global Financial Stability Report by the IMF). The importance of a domestic institutional investor base is well illustrated

FIGURE 2

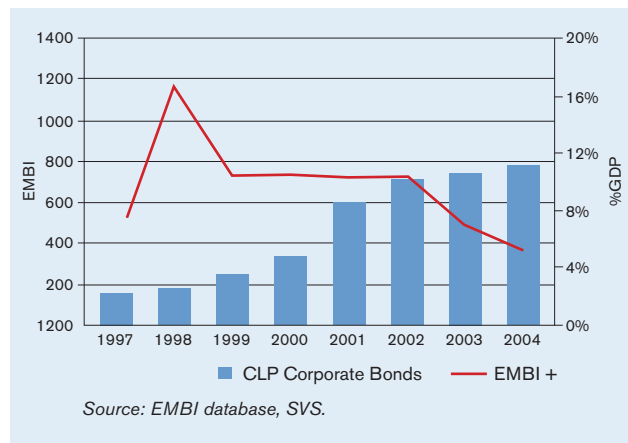
Foreign Holdings of Financial Instruments, 2006

Source: McKinsey Global Institute.

by the case of Chile in the late 1990s. As shown in Figure 3, the Russian and Brazil crises in that period (reflected in higher borrowing spreads) hindered the access of large Chilean companies to international markets. However, these companies were able to issue corporate bonds in the domestic market, due to well-developed pension and insurance sectors.

FIGURE 3

EMBI Spreads and the Stock of Corporate Bonds in Chile



In countries where bank credit slows down and capital markets are not able to respond, governments may be tempted to enhance the role of state commercial banks and national development banks in order to promote access to finance.

As in previous crises, there will be increased financial system consolidation around stronger players in those emerging countries that experience a crisis. However, unlike most previous episodes, the process is not likely to be driven by developed country banks but rather by the government via nationalizations and/or the absorption of failing banks by state-owned entities.

The possible retrenchment of developed country financial institutions back to their ‘core’ business may involve a retreat from some business lines that they had developed in emerging countries. This may well provide an opening for further ‘South-South’ expansion in financial services.

Financial Sector Policymaking

One of the important lessons from the crisis is the need to ensure sound financial innovation. The regulators’ inability (and sometimes unwillingness) to sufficiently vet and monitor new financial instruments, players and markets has facilitated regulatory arbitrage and compromised financial stability. Striking an appropriate balance between financial innovation and stability will be a difficult act in many countries.

The crisis has reaffirmed some fundamental tenets of financial sector policymaking, such as the need for a solid financial infrastructure, including sound accounting and auditing standards, effective collateral registration and enforcement systems, well-functioning payments and settlement systems, and well designed corporate governance structures.

At the same time, the crisis is also prompting a re-consideration of certain elements of financial sector policymaking, including regulation and supervision. However, the policy response to-date has not taken the form of a major paradigm shift. Although reforms are under way in several areas coordinated by the Financial Stability Forum², commentators have criticized them as a ‘whack-a-mole’ strategy that does not fundamentally reassess the way that financial regulation is undertaken.

Having said that, historical experience shows that it is probably not a good idea to introduce major reforms in the middle of a crisis; more time is needed to carefully study the causes of the crisis and develop suitable policy responses.

The reforms that are already on-going, as well as those that are anticipated/debated in policy circles, have been categorized into six thematic areas and are presented below.

These issues are not equally relevant for all emerging countries, while the existing financial sector reform

² See <http://www.fsforum.org/> for details.

agenda in many of these countries (e.g. consolidated and risk-based supervision, microfinance, insurance etc.) continues to be valid. The World Bank's role in promoting financial development and access to client countries remains important, especially under these circumstances.

Government Involvement in Financial Systems

There may be a fundamental reconsideration of the role and importance of the government in the financial system, not just indirectly (strengthened oversight) but also directly through state ownership, particularly in crisis countries.

A corollary to this trend will be reduced reliance on market mechanisms to attain financial sector policy objectives, and a possible slowing down of financial liberalization in some emerging countries. For example, the inability of regulators to keep pace with financial innovation may convince some countries to introduce or maintain a pre-approval process (à la Food and Drug Administration–FDA) for new financial products and services.

The need to kick start lending to the real sector once again following the credit freeze may lead several countries to upgrade the role of development banks and the use of directed lines of credit and credit guarantee schemes, as well as to involve themselves in the resource allocation decisions of recently-nationalized banks. A lot will depend on the specific country context and 'levers' that are available to policymakers for tackling the real sector problems from this crisis.

While the presence of the state in the financial sector may increase in the next few years, it will be important to keep in mind that permanent and pervasive state ownership is hardly the recipe for financial development and growth, as indicated by the experiences of Central Europe, Egypt, and other countries.

Countries that provide a role for state institutions should ensure that they operate on the same level

playing field as private institutions and under sound governance arrangements. Ensuring such conditions will prove challenging in most countries. The role played by Fannie May and Freddie Mac in the US financial crisis is another reminder of the potential distortions caused by political interference in financial institutions with dual mandates.

It is also unclear at this stage whether the drive to strengthen oversight may lead to more autonomy and flexibility given to supervisors (rules vs. discretion debate). There are good conceptual arguments to be made in support of both approaches, although prior experience (e.g. savings-and-loans crisis in the US) supports the design of a more rules-based regulatory system. However, as the current crisis has shown yet again, rules can—and often are—overridden during bad times (time inconsistency).

A combination of both a risk based approach together with sufficient rules (e.g. prompt corrective action rules) and transaction verification methodologies (e.g. review of audit procedures, credit specific reviews) tailored to countries' economic, regulatory, and supervisory development should evolve.

Macro-Prudential Regulation

The importance of macro-prudential regulation will likely increase substantially as policymakers focus on systemic vulnerabilities from the business cycle (time dimension) and from the increased banking system concentration and inter-linkages between different parts of the financial system (cross-sectional dimension).

The time dimension could be addressed via measures to mitigate pro-cyclicality, e.g. adoption of a leverage ratio (as in the US), anti-cyclical loan loss provisions (as in Spain), or ex ante capital buffers over-and-above Basel II (as might happen in Switzerland). More radical measures would include a substantial revision of Basel II's Pillar 1 to make capital charges less cyclical in nature, although (ironically) it would also reduce their intended risk sensitivity. Moreover, it will be interesting to see whether future efforts to

'lean against' potential bubbles will rely primarily on monetary or macro-prudential policy measures.

The cross-sectional dimension could be addressed indirectly via policy measures to promote competition, increase supervisory scrutiny for systemically important banks, minimize regulatory arbitrage across financial sectors (e.g. harmonization of capital rules for certain credit instruments), and reduce interconnectedness (e.g. development of clearinghouse for credit derivatives, consolidation of off-balance sheet vehicles). However, it could also be addressed more directly via, for example, greater capital adequacy requirements under Pillar 2 of Basel II for banks deemed to be 'too interconnected/big to fail'.

In a few countries, there will be a rethink of institutional arrangements for financial sector oversight, such as a move towards integrated supervisory agencies (which had already been taking place in several countries) and bringing such agencies into central banks in order to strengthen financial stability. However, recent international experience has shown that such solutions do not necessarily represent a panacea for better supervision and may actually backfire if not implemented properly.

Micro-Prudential Regulation

The crisis has intensified the debate on the adequacy and effectiveness of Basel II, particularly the reliance on credit rating agencies, banks' own risk management models, and the excessively mechanistic capital formulae in Pillar 1. Nevertheless, regulatory authorities in most countries still seem determined to proceed with its implementation given the enormous regulatory and political challenges of fundamentally restructuring it. There seems to be agreement on the need to strengthen specific elements of the agreement—for example, tightening capital charges for securitized exposures and trading books—but not much beyond that.

Pillar 2 has clearly emerged as the most critical component of the overall architecture since it offers supervisory discretion to go over-and-above Pillar 1

requirements by introducing, for example, some of the aforementioned macro-prudential measures as well as tighter liquidity requirements to address the negative feedback loop between deleveraging and loss of liquidity that has been observed in the financial crisis. However, it is an open question whether this Pillar can (or should) accommodate the vast majority of additional prudential measures that are under consideration.

Regarding Pillar 3, additional financial reporting and disclosure has been cited as a solution to previous crises, and will undoubtedly be mentioned once again in the present one. While the starting point is that more information is healthier for markets (whether the news is good or bad), there is concern about the ability of market participants to process so much information (e.g. HSBC's annual report is over 1,000 pages) and to respond to it.

Regulatory responses will probably include greater emphasis on 'what's important' (e.g. the MD&A section of statutory reporting), stricter requirements for financial accounting literacy on the part of market participants, and greater scrutiny by supervisors of the accuracy and integrity of banks' financial disclosures.

Pillar 3 remains the least understood and poorly defined pillar. There are strong indications that regardless of information provided, markets have chosen to disregard that information provided. Complacency and herd behavior have caused market participants to ignore warning signals when 'everybody is doing it'. The current crisis revealed that market discipline will depend not only on improved disclosure but also on improving the incentives and mechanisms for stakeholders to use effectively the available information.

The absorption of smaller and/or weaker banks by larger ones in this crisis, often with the explicit support of the authorities, will likely increase financial system concentration and renew concerns about the over-extension of the financial safety net and the incidence of conflicts of interest within financial groups. The regulatory response will likely be stricter oversight of

systemically important institutions and tougher rules regarding “Chinese walls” and other ways to mitigate such conflicts.

Home-host supervision issues will also come to the fore if there is a collapse of a major cross-border banking group. It is highly debatable whether current actions, such as the creation of colleges of supervisors for systemically important banks in the EU, will be sufficient policy responses in such instances. Host countries may end up exercising greater authority in the future if problems arise from the home, rather than the host, jurisdiction. The debates over outsourcing of key operational functions and over the regulation of bank branches versus subsidiaries will likely be resurrected.

There will be greater oversight and transparency of OTC markets, instruments and participants, particularly in the area of credit derivatives, to ensure that excessive leverage does not build up in the financial system. It is unclear yet whether this will result in greater harmonization of prudential requirements for all participants in the same market/instrument irrespective of their characteristics.

Financial/Market Infrastructure

The crisis has accelerated the process for improving accounting standards, particularly regarding the treatment of off-balance sheet entities and fair value accounting (FVA). Although the concept of FVA has been around for a long time and is considered an essential ingredient of market integrity, some have argued that it has aggravated the crisis by forcing institutions to value illiquid assets at artificially depressed prices. If one accepts that prices are not meaningful in such instances, different rules or additional ‘degrees of freedom’ may need to be introduced; the question then becomes what triggers this flexibility and at what level is it applied. This is a challenging area where further work is urgently needed.

Recent changes to international accounting standards by the International Accounting Standards Board (IASB) were intended to give breathing space for

banks to deal with their problems. These changes include inter alia the possibility to reclassify financial assets from FVA type assets to historical cost type assets, allowing banks to avoid valuing illiquid securities at artificially depressed prices. These changes may achieve this objective, but some have denounced this measure as politically expedient, and harmful for investor confidence and market discipline.

Ensuring that credit reporting systems promote financial stability (in addition to access) will likely be an important task going forward. It would be worth analyzing whether, for example, some of the weaknesses in credit underwriting observed in this crisis stem from the lack of a comprehensive credit infrastructure or from the inability/unwillingness of the authorities and market participants to properly use it for risk management purposes. The WBG is currently in discussions with the BIS to develop international standards on credit information systems, their use and oversight.

The role of financial gatekeepers—credit rating agencies (CRAs) and external auditors—is likely to be substantially reviewed. This is part of a broader problem that has been exposed in this crisis, namely that investors remain unclear about the respective responsibilities of different actors (bank boards, internal control functions, CRAs, external auditors).

Reforms to CRAs and the use of ratings could proceed along two different tracks. One track would be for the authorities to eliminate the ‘hardwiring’ of ratings in regulation, as the US Securities and Exchange Commission (SEC) has recently suggested, in order to enhance the incentives for due diligence by investors. Another track would be to increase the oversight of CRAs so that it is commensurate to their reliance for supervisory purposes, as the EU will likely propose. The latter direction will likely include efforts to address conflicts of interest by imposing stronger independent oversight and by reviewing the scope for imposing financial liabilities for negligence.

External auditors have not yet played a major role in

this crisis, although their negligence or failures usually becomes obvious in post-mortems, as illustrated by an extensive report commissioned by a US bankruptcy court in the failure of a major mortgage lender (New Century Financial). Similar to CRAs, their reform will need to tackle a broad array of problems, including a cartelized market structure, conflicts of interest, lack of adequate oversight in most jurisdictions, and a ‘too few to fail’ situation that hinders accountability.

Increased emphasis will likely be placed on key elements of the payments and settlement systems infrastructures. These include the development of organized and collateralized markets and central bank facilities for liquidity provision, the settlement of securities transactions in a true delivery-versus-payment basis, the settlement of foreign exchange transactions in a payment-versus-payment basis (e.g. CLS Bank), the design of safe settlement mechanisms for financial derivatives (both exchange-traded and OTC), the application of international standards for central counterparties, and the design of better oversight and coordination mechanisms by the authorities. The WBG is well-positioned to provide advice in this area.

Related to the previous point, the design of valuation rules for financial instruments (particularly OTC

ones) might also need to be reconsidered in several countries as it may have compromised the integrity of pricing information (consistency and transparency across market participants). This includes, for example, the choice between centralized versus disaggregated pricing rules, the selection and oversight of price vendors, the valuation of homogeneous versus heterogeneous products.

Finally, corporate governance arrangements will be closely reevaluated, particularly in terms of risk oversight by management and boards and executive compensation plans. Notwithstanding the elevated attention given to governance standards in recent years, breakdowns continue to occur. In many cases, the nature and complexity of risk taking by business lines may only in rare cases be understandable at board levels. It will be important to identify the institutions that handled the crisis well, and evaluate their internal governance structures and processes.

Private Pension Systems/Second Pillars

The significant decline in debt and equity prices has hit hard the portfolios of pension funds in emerging countries. Table 3 illustrates the negative returns for a sample of Eastern European and Latin American

TABLE 3

Real returns of mandatory pension funds in selected countries (yoy)

		Growth	Balanced	Conservative
Chile	13-Oct-08	-46.1	-23.1	0.0
Mexico	30-Sep-08	-8.3	-6.0	-0.5
Peru	10-Oct-08	-47.8	-33.9	-14.5
Uruguay	30-Sep-08		-7.5	
Estonia	15-Oct-08	-30.5	-20.9	-9.7
Hungary	15-Oct-08	-35.0*	..	-18.0*
Lithuania	15-Oct-08	-48.4	-32.6	-9.4
Poland	30-Sep-08		-17.4	
Slovak Republic	13-Oct-08	-12.4	-10.3	-2.0

Note: * Conservative estimate.

Sources: Supervisory agencies in selected countries.

countries that have introduced mandatory pension systems in the past 15 years.

These funds do not face a solvency issue, as most of these new systems operate on a defined contribution basis. Moreover, most pension systems are still immature, and participants could still benefit from a recovery of asset prices before retirement.

However, there may still be a social issue related to the decline in retirement savings, at least for some cohorts. In these cases, government may question the feasibility of these new private systems, and be tempted to roll back the reform and switch all the participants to the public pay-as-you-go (PAYG) system.

While it is important to address the effects of the crisis on participants, a complete rollback of the reform may not be advisable in many cases. For one, a diversified pension system may still generate better outcomes for participants in the long-run. Moreover, switching all participants back to the PAYG system may expose the Government to large and unsustainable fiscal liabilities. Furthermore, a solid institutional investor base is a source of stability for domestic financial systems (as noted above).

Governments may consider treating the effect of the crisis on the private pension system as a tail event, and provide targeted compensation to the cohorts affected by the crisis, before considering a complete rollback of the reform. Pension fund participants would thus receive a similar treatment to that provided to bank depositors (i.e. additional insurance, extended for a defined period of time).

At the same time, the crisis may also provide the opportunity for emerging countries to improve the structure and regulation of their new private systems, addressing lingering problems of high costs and fees that have affected their performance. Countries that have implemented radical reforms and currently rely excessively on private systems may also consider whether there is a case for reintroducing or reinforcing a public pillar.

The insurance sector

In emerging countries, the solvency levels of insurance companies are already inadequate for a number of insurers and reinsurers, due either to rapid growth or poor management, and there is enhanced exposure to the banks through investments being held as deposits. Governments should be prepared to facilitate the merger of insurance companies whenever necessary. Further work on consolidated supervision is also required, particularly where the insurance holding company assumes credit risk. Regulators should also monitor the risks associated with the possible attempt of international insurance companies to tap their subsidiaries for liquidity.

Housing Finance

Given that the initial trigger of the crisis was US housing finance, there are important policy lessons that will need to be explored and incorporated in policy advice.

The role of the state will likely evolve to include a catastrophic risk approach to housing problems (state guarantees), the development of smarter subsidies for lower-income households, less emphasis on ‘unbundling’ housing finance systems, better design of secondary market vehicles (GSEs), and the promotion of alternative funding instruments to access bond markets (e.g. covered bonds).

In addition, there will likely be increased scrutiny of mortgage lenders (consumer information and protection) as well as better monitoring and reporting of risks across the entire value chain (and not only bank balance sheets). ■

Appendix I Causes of the Financial Crisis

This Appendix provides a brief overview of the primary causes of the financial crisis that have motivated the policy reforms and debates discussed in the paper. It is important to emphasize that a full assessment of these causes remains tentative at this stage and that, in spite of its global nature, there have been different triggers and manifestations of the financial crisis in different countries that have also conditioned the policy responses (no ‘one-size-fits-all’ approach).

Background to the crisis

A long period of abundant liquidity, rising asset prices and low interest rates, in the context of international financial integration and innovation, led to the build-up of global macroeconomic imbalances (growing US current account deficit financed by capital inflows from Asian and oil-producing countries) as well as a global “search-for-yield” and general under-pricing of risk by investors. Regulators in some cases facilitated, and in other cases failed to respond to, the build-up in imbalances.

The abundant liquidity induced a rapid expansion of credit in many developed and emerging countries. Mortgage finance was one of the high growth areas, both in the US and elsewhere, and contributed to a bubble in global real estate prices.

Financial innovation increased systemic vulnerability in a number of ways. The growth of the mortgage market, especially in the US, was accelerated by the adoption of the “originate and distribute” model (i.e. loan origination for sale to capital markets) that was

supported by financial innovation in structured finance and credit derivatives as well as by an active secondary market for mortgage-related securities. Moreover, both regulated and unregulated financial institutions became more ‘interconnected’ via OTC markets with bilateral clearing and settlement arrangements.

At the same time, the favorable macroeconomic environment, increased competition, technological advances, and growing asset prices caused financial institutions to move down-market, to lower credit underwriting standards, to engage in riskier trading activities with maturity mismatches (funding of longer-term investments using short-term instruments), and to rely excessively on quantitative risk models.

The same factors bred complacency among capital markets investors, leading them to reduce the monitoring of risks and proper vetting of their investments.

The slowdown and subsequent decline in US housing prices since 2005 was the trigger for the unraveling of the highly leveraged and unsound lending that had been building over time. These weaknesses first became apparent in the area of subprime lending, although other market segments (prime mortgage loans, commercial real estate, leveraged loans etc.) have subsequently been affected as well.

Contributing factors to the initial phases of the crisis

Structural flaws in the mortgage financing chain stemmed from its compartmentalization and the lack

of retained exposures by mortgage brokers and lenders, thereby reducing incentives for sound risk management and underwriting standards (moral hazard).

Market discipline proved weak, due to inappropriate accounting rules, complex securitization structures, inadequate disclosure, conflicts of interests among the main gatekeepers (external auditors, credit rating agencies), lack of own due diligence by capital market investors, and poor bank governance and compensation arrangements.

Consumer protection was inadequate as some lenders enticed (mostly lower-income) consumers to obtain mortgages with features (e.g. teaser interest rates, high origination fees and prepayment penalties, negative amortization) that carried inappropriate and not-well-understood risks or were abusive in nature.

Prudential oversight was lax, allowing poor lending standards, the proliferation of non-transparent securitization structures, poor risk management throughout the securitization chain, and the build-up of excessive leverage by financial institutions, especially via the creation of a parallel and opaque 'shadow financial system'.

The weaknesses in prudential oversight were partly due to particular characteristics of the US financial system, such as the existence of different regulatory regimes for investment banks, commercial banks and government-sponsored enterprises (Fannie Mae and Freddie Mac), as well as the complex and fragmented supervisory architecture, comprising several federal and state agencies with competing and overlapping mandates.

The above factors reduced confidence and risk appetite among market participants, and created a process of deleveraging and of flight-to-quality.

Segments of the financial industry have argued that fair value accounting rules have aggravated the crisis by forcing institutions to value their illiquid assets at artificially depressed prices and contributing

to further price declines. As argued in the main note, this is a challenging area where further work will be needed.

A potential contributor to the severity of the crisis has arguably been the policy response to the aforementioned problems, including the initial pre-occupation with liquidity (rather than solvency) concerns, the adoption of ad hoc measures in response to individual credit events (e.g. Bear Stearns takeover, insurance monoline problems, auction rate securities market implosion, Fannie Mae and Freddie Mac conservatorship), as well as the decision to allow Lehman Brothers to declare bankruptcy in order to allegedly re-establish market discipline in the expectation that the market was prepared for such an eventuality.

Propagation of the crisis to emerging countries

While the crisis may have originated in developed countries and in the subprime-cum-structured finance markets, it has spread widely to other countries and markets via several different propagation mechanisms.

The initial impact stemmed from the direct exposure of emerging market financial institutions to subprime-related securities. In general, such impact was relatively small and emerging countries appeared to be resilient to the crisis.

However, the second-round effects have been much more severe and have primarily stemmed from the on-going deleveraging process and the reversal of capital flows. Such outflows have led to significant—and sometimes indiscriminate—debt and equity market sell-offs, higher interest rates and spreads, and pressures on exchange rates, creating negative feedback loops.

The rapid growth in many emerging markets was fueled by cross-border bank lending, particularly in countries where foreign banks play a major role. Anec-

total reports suggest a significant tightening of credit. This can be seen as a reduction of interbank lines/corporate lines from international banks to domestic banks, or through foreign-based parents draining local subs/branches (corporates and banks), which have the potential of creating ‘sudden stops’ and contributing to credit crunches.

Importantly, the de-leveraging process has also exposed pre-existing home-grown problems in many emerging countries, which have served as triggers for adverse market reactions by investors. These problems include:

- large current account deficits financed by private capital inflows
- lax credit underwriting standards that were hidden by years of extraordinary growth in asset prices and in mortgage, consumer and SME lending
- maturity/currency mismatches on bank and corporate balance sheets

- weak fiscal positions (but only in a few cases compared to 1997)
- overvalued currencies (partly driven by the boom in commodity prices)
- political instability.

The abundant global liquidity and financial integration that preceded the crisis has made many countries more vulnerable to financial contagion even where the core problems are home-grown. The decline in house prices is not solely a US phenomenon, and there are several countries that are currently undergoing significant real declines in asset markets.

Moreover, the rapid decline in projected economic growth for developed countries will hit hard those countries dependent on commodity prices, remittances, and exports. The consequent slowdown in economic growth and worsening of current account and fiscal positions are also expected to reduce the ability of these countries to mitigate the effects of the crisis.