EXECUTIVE SUMMARY

With financial markets worldwide facing growing turmoil, internationally coherent and decisive policy measures will be required to restore confidence in the global financial system. Failure to do so could usher in a period in which the ongoing deleveraging process becomes increasingly disorderly and costly for the real economy. In any case, the process of restoring an orderly system will be challenging, as a significant deleveraging is both necessary and inevitable. It is against this challenging and still evolving backdrop that the Global Financial Stability Report (GFSR) *frames the recent events to suggest potential policy measures that could be helpful in the current circumstances.*

Confidence in global financial institutions and markets has been badly shaken. Threats to systemic stability became manifest in September with the collapse or near-collapse of several key institutions. The October 2008 *World Economic Outlook* notes that the strains afflicting the global financial system are expected to deepen the downturn in global growth and restrain the recovery. Moreover, the risk of a more severe adverse feedback loop between the financial system and the broader economy represents a critical threat. The combination of mounting losses, falling asset prices, and a deepening economic downturn, has caused serious doubts about the viability of a widening swath of the financial system. The ongoing deleveraging process outlined in the April 2008 *GFSR* has accelerated and become disorderly—marked by a rapid decline in financial institutions' share prices, higher costs of funding and credit default protection and depressed asset prices. One result has been sudden failures of institutions as markets have become unwilling (or unable) to provide capital and funding or absorb assets. Piecemeal interventions to address the attendant liquidity strains and resolve the troubled institutions did not succeed in restoring market confidence, as they have not addressed the widespread nature of the underlying problems. The intensifying worries about counterparty risks has created a near lock up of global money markets. Chapter 1 provides the basis for a more comprehensive policy approach—as is now being considered in some countries. It evaluates how far the deleveraging process has progressed and how much lies ahead. It also suggests a comprehensive set of measures that could arrest the currently destructive process.

Restoration of financial stability would now benefit from a publicly-stated collective commitment by the authorities of the affected countries to address the issue in a consistent and coherent manner. While the precise measures will inevitably differ across countries, experience from earlier crises indicates that five principles could serve to guide the scope and design of measures that could form the basis for a restoration of confidence in these exceptional circumstances. These include:

(i) Employ measures that are comprehensive, timely, and clearly communicated. They should encompass the principal challenges arising from the strains of deleveraging: namely, *improving funding* availability, cost, and maturity to stabilize balance sheets; *injecting capital* to support viable institutions with sound underpinnings that are currently unable to provide adequate credit; and *buttressing troubled assets* by using public sector balance sheets to promote orderly deleveraging. In applying existing or new regulations, authorities should avoid exacerbating procyclical effects. The objectives of the measures should be clear and operational procedures transparent.

(ii) Aim for a consistent and coherent set of policies to stabilize the global financial system across countries in order to maximize impact while avoiding adverse effects on other countries.

(iii) Ensure rapid response on the basis of early detection of strains. This requires a high degree of coordination within each country, and in many cases across borders, and a framework that allows for decisive action by potentially different sets of authorities.

(iv) Assure that emergency government interventions are temporary and taxpayer interests are protected. Accountability of government actions is important for all stakeholders and the conditions for support should include private participation in downside risks and taxpayer participation in upside benefits. Intervention mechanisms should minimize moral hazard, while recognizing the exigency of the situation and the evident need for public support.

(v) Pursue the medium-term objective of a more sound, competitive, and efficient financial system. Achieving this objective requires both an orderly resolution of nonviable financial institutions and a strengthening of the international macro-financial stability framework to help improve supervision and regulation at the domestic and global levels, as well as mechanisms to improve the effectiveness of market discipline. Funding and securitization markets critical to pricing and intermediating credit should be strengthened, including by reducing counterparty risks through centralized clearing organizations.

While satisfying these guiding principles, concrete actions are needed to tackle three interrelated areas associated with deleveraging: insufficient capital, falling and uncertain asset valuations, and dysfunctional funding markets. Arresting the spiraling interaction between these three elements is essential if there is to be a more orderly deleveraging process.

Capital. To keep private sector credit growing, even modestly, while strengthening bank capital ratios, the GFSR estimates some $675 billion in capital would be needed by the major global banks over the next several years. Several measures could be considered:

- With many financial institutions finding it much more difficult to raise private capital at the present time, the authorities may need to inject capital into viable institutions. While there are many ways to accomplish this, it is preferable that the scheme provide some upside for the taxpayer, coupled with incentives for existing and new private shareholders to provide new capital.
- Though politically difficult, orderly resolution of nonviable banks would demonstrate a commitment to a competitive and well-capitalized banking system.

Assets. As private sector balance sheets shed assets to reduce leverage the use of public sector balance sheets can help prevent "fire-sale" liquidations that threaten to reduce bank capital.

- Countries whose banks have large exposures to securitize or problem assets could consider mechanisms for the government to purchase or provide long-term funding for such assets. This should create greater certainty about balance sheet health. Setting up an asset management company provides a framework of legal clarity and accountability for the process.
- Allowing for a greater degree of judgment in the application of mark-to-market rules may avoid accelerating capital needs by reducing the pressure to value securities at low "fire-sale" prices. Such judgment would require close supervision and should be accompanied by appropriate disclosure in order to avoid undermining confidence in balance sheets of existing institutions.

Funding. Financial institutions that rely on wholesale funding, especially in cross-border markets, have faced severe and mounting refinance risks. Central banks therefore are exploring more ways to extend term financing to meet funding needs of institutions. The measures described above to boost capital and underpin asset valuations, as well as those already undertaken to provide liquidity, should provide essential support for the markets to function properly and confidence to be reestablished. Continued progress on reducing counterparty risks, including centralized clearing and settlement arrangements, will also help. But experience in past crises indicates that in some circumstances additional measures may be needed. Under extreme circumstances:

- Deposit insurance of individual retail accounts could be expanded beyond normal limits. However, expansion of deposit insurance limits or, if conditions deteriorate further, use of a blanket guarantee should only be undertaken as a temporary, emergency measure and is best undertaken in a coordinated fashion across countries.
- Guarantees could cover senior and subordinated debt liabilities for a temporary period of time. Ideally, these types of guarantees should include some cost to the institutions receiving cover-

age; such as a usage fee, fitness test, or other criteria.

While these measures represent a broad approach, some of the specifics have already been put in place by various authorities and there are encouraging signs that more are being considered. Other positive developments include the resolve and determination of the authorities to act decisively; the significant balance sheet adjustments already under way; and an openness to revisit the global regulatory framework. This opens a window of opportunity to better align regulation and incentives in various jurisdictions in the medium run. For now, however, the principal focus will remain that of containing existing disruptive forces.

Chapter 1

Against this backdrop, Chapter 1 of the GFSR assesses the extent of further losses faced by global institutions. It measures the reduction in leverage needed in the financial system, estimates the amount of assets that need to be shed, and the amount of capital to be raised. This analysis concludes that public resources will be needed to ensure a return to financial stability and a more orderly deleveraging process that avoids a severe credit crunch. The most significant risk remains the intensification of the adverse feedback loop between the financial system and the real economy.

Because the United States remains the epicenter of the financial crisis, Chapter 1 examines U.S. prospects in some detail. The continuing decline in the U.S. housing market and wider economic slowdown is contributing to new loan deterioration—delinquencies on prime mortgages and commercial real estate as well as corporate and consumer loans are increasing. With default rates yet to peak and the recent heightened market distress, declared losses on U.S. loans and securitized assets are likely to increase further to about $1.4 trillion, significantly higher than the estimate in the April 2008 GFSR. With the economic slowdown spreading, financial institutions will increasingly face losses on non-U.S. assets as well. In some European countries, too, these difficulties are being accentuated by weakening local housing markets.

Financial institutions had been raising capital to bolster their balance sheets and these efforts were initially successful, but now the prospects for further issuance are more limited and more expensive, reflecting weaker confidence in the underlying viability of institutions. As a result, Chapter 1 suggests that the deleveraging in the banking sector will take place along multiple dimensions: requiring asset sales, slower new asset growth, and radical changes to banks' business models as many previous sources of revenue have nearly disappeared. A similar deleveraging process is under way for many nonbanks, such as hedge funds, where the ability to use margin financing and private repurchase (repo) markets to take leveraged positions has been severely curtailed. Strains in funding markets have increased redemptions in money market mutual funds and exacerbated rollover risks for corporate borrowers. The far-reaching nature of the events that are unfolding is illustrated by the fact that within a period of one week, large stand-alone investment banks disappeared from the U.S. financial landscape. While the long-run implications are not certain, financial sectors are likely to consolidate, new business models will need to be found, and firms will operate with less leverage in the foreseeable future.

The ongoing uncertainty surrounding valuation of what were once thought to be low-risk assets has led to difficulties in judging capital adequacy. Chapter 1 observes that most market participants, rating agencies, and regulators agree that capital buffers will need to be higher than previously thought. Moreover, they should be based on a forward-looking analysis of risk, rather than a mechanical application of regulatory ratios. To the extent that the move to permanently higher capital ratios is mandated, it should be phased in so that their attainment does not amplify the existing cyclical downturn.

Though achieving higher levels will further slow the restoration of normal credit conditions, the process should be under way by late 2009 to put financial institutions in a better position to support the recovery.

Whereas emerging markets overall had initially remained fairly resilient to global financial turmoil, they have recently come under increasing pressure. The cost and availability of financing have become more difficult and equity markets have corrected sharply, albeit from elevated levels. Capital outflows have intensified, leading to tighter international and, in some cases, domestic liquidity conditions. Borrowers and financial institutions in emerging markets will be confronted with a more trying macroeconomic environment. Policy makers, too, face challenges as global growth slows and the lagged pass-through of domestic inflationary pressures continues—and all this against the backdrop of lower confidence and the reversal of earlier flows into these markets. There is an important risk that such a confluence of circumstances could accelerate a downturn in the domestic credit cycle in some emerging market economies.

Chapter 1 also lays out some more specific policy implications for public authorities than those presented above, building on the analysis in the chapter and conclusions of previous *GFSRs*. Although the focus has been on what the public sector should do, private sector financial institutions continue to play a crucial role in identifying and rectifying deficiencies in order to place financial intermediation on a more sound footing. The key elements, which will need to be reinforced through support from regulators and supervisors, are:

- *Maintain an orderly deleveraging process*. Financial institutions should, first, be focused on strengthening their balance sheets—preferably by attracting new capital rather than selling assets; and second, ensure adequate funding sources consistent with their business model.
- *Strengthen risk management systems*. As part of overall risk management improvements, firms should endeavor to better align compensation packages to reward returns on a risk-adjusted basis using more robust risk management practices, with greater emphasis on the long-term component of compensation.
- *Improve valuation techniques and reporting.* Implementation of new Financial Stability Forum (FSF) disclosure guidelines and frequent asset valuations and timely disclosures will reduce uncertainty and are important steps that can help provide information about the health of counterparties.
- *Develop better clearing and settlement mechanisms for over-the-counter products.* Private sector efforts to build clearing and settlement facilities to lower counterparty risks should continue apace, particularly for the credit default swaps market, where settlement issues need to be addressed urgently. Higher capital charges for counterparty exposures would help and are being considered by various regulators.

Chapter 2

The combination of liquidity and solvency risks has led to a period of elevated short-term interest rate spreads and substantially reduced transaction volumes, with funding markets remaining stressed for an unprecedented period. Chapter 2 delves into the ongoing inability of the bank funding markets to perform their role in distributing liquidity across banks and near-banks and the consequences for the interest rate channel of monetary policy transmission.

The chapter first notes that the short-term rates-setting procedures, including for London Interbank Offer Rates (LIBOR) and the Euribor rate, are not broken, but improvements are desirable, since LIBOR rates are estimated to underpin some $400 trillion of financial derivatives contracts. Although most of the analysis in the chapter preceded the most recent steep rise in LIBOR rates, the basic recommendations remain intact. In examining the reasons for the elevated spreads between the LIBOR and the overnight index swap (OIS) market, the chapter confirms that default concerns became the overriding component of the U.S. dollar LIBOR-OIS spread starting in early 2008. In addition, foreign currency swap spreads explain the Euribor-OIS and sterling LIBOR-OIS spreads, signifying that U.S. dollar liquidity pressures are spilling over into these other currencies.

The chapter also examines how the interest rate channel of monetary policy transmission has been affected by the crisis, in light of three longer-term trends: increased growth of activity in near-banks, more extensive use of wholesale funding markets, and a movement away from a stable deposit base to a larger proportion of funding obtained with short-term maturities. Although these trends have generally made interest rate transmission more stable, over the last year the smooth relationships between the policy rate and lending rates that had been established changed dramatically, particularly for the United States. From mid-2007 until June 2008, the reliability of forecasting lending rates for both the United States and for the euro area has deteriorated, but more so for the United States.

The chapter recommends:

- *Improving infrastructure in funding markets.* Specifically, for the calculation of LIBOR, a larger sample of banks and quotes that also include non-bank sources of unsecured term funding, as well as publishing aggregate volume data, would engender greater confidence in these benchmark rates.
- *More attention to both credit and liquidity risks by the authorities.* Since wide interbank spreads were driven primarily by bank distress risks (encompassing both credit and liquidity risks), it is unlikely that ever-easier access to emergency liquidity from central banks will relieve the continued stress in interbank funding. Public authorities will need to continue to address counterparty risks since private institutions are finding it increasingly difficult to do so.
- *Limited indirect support to money markets.* Central bank lending facilities aimed at restoring the functioning of interbank markets to transmit monetary policy need to be designed carefully. They should provide incentives for market participants to start dealing amongst themselves and thus to allow for an orderly exit by the central bank once more extreme strains have eased. The European Central Bank's alterations to its collateral policies beginning next year is a step in this direction.
- *Encouraging central bank cooperation and communication.* Recent experience has highlighted the importance of properly functioning forex swap markets in addition to local money markets. In particular, the latest round of liquidity distress was countered by the cooperative actions of major central banks to address foreign currency funding needs. Regular communication by central banks about their actions and reasons for them can reduce uncertainties. Continued convergence of their operational procedures would also aid in achieving this goal.

Chapter 3

Since the crisis began, the role of fair value accounting (FVA) practices has been under close scrutiny. Chapter 3 examines the potential procyclical role that the application of FVA methods may have played in the development and outcome of the current credit cycle.

Using actual accounting data from five representative types of financial institutions, this chapter simulates the balance sheet effects of several shocks calibrated to recent events. The analysis confirms that, depending on the types of assets and liabilities present on the balance sheet, these shocks amplify cyclical fluctuations of valuations. The simulations are also used to examine potential adjustments surrounding FVA methods, showing such adjustments act as expected to smooth the cyclical variation, but by doing so the assigned valuations do not represent fair values. It is worth recognizing, however, that in some cases, such as in highly illiquid markets or in buoyant or dire circumstances, FVA can also produce valuations that do not reflect longer-term fundamentals and the cash flows and risks under consideration.

Overall, the chapter concludes that the application of FVA is still the way forward, but that further enhancements of FVA methodologies are needed to help mitigate the exaggerated effects of some valuation techniques. A key challenge will be to enrich the FVA framework so that it can contribute to better market discipline and financial stability. The various accounting, prudential, and risk management approaches to valuation should be reconciled so that they work together to promote a more stable financial system. Importantly, this will require adjustments on the part of all three disciplines to ensure consistency.

The policy recommendations are:

- *Selectively add information on valuation.* Accounting valuations themselves need to be supplemented with additional information, such as the expected variation of FV valuations, modeling techniques, and assumptions, so that the user can appropriately assess the risks of the institution.
- *Raise capital buffers and provisions.* Higher capital buffers and the use of forward-looking provisioning would help protect against the downturn in the cycle. If protection against the full magnitude of the downward cycle is desired, then the simulations suggest that building up a capital cushion of some 30–40 percent above normal levels in good times would be required to absorb the most severe shocks.
- *Provide targeted risk disclosures.* Firms could contemplate providing more focused reporting that is meant to satisfy different needs of users. Shorter reports at higher frequencies may be better than longer reports and lower frequencies, depending on the intended audience.

Chapter 4

Emerging market (EM) countries have not been at the forefront of the crisis, but their vulnerability to knock-on effects should not be underestimated. Chapter 4 examines equity markets in EM countries to assess the extent to which external/global and domestic/fundamental factors drive equity market valuations. It confirms that global factors are important in explaining the movement in EM equity prices as are domestic fundamentals. Using various measures of correlation, Chapter 4 also finds that the scope for spillovers to emerging equity markets has risen, suggesting a growing transmission channel for equity price movements. This can, in turn, affect consumption and investment in emerging markets, although such macrofinancial linkages are found to be small and they tend to play out gradually. Nevertheless, it suggests that policymakers need to remain engaged over the longer run in building resilience in their local financial markets.

Specifically, the standard policies that could help to make markets more resilient in the medium run are well-known and typically include:

- *Fostering a broader and more diversified investor base.* Encourage a diversity of investors, including institutional investors, such as pension funds and insurance companies, which tend to have long-term investment horizons.
- *Aiding price discovery.* Remove impediments to price discovery by avoiding artificial delays in revealing prices or limiting price movements.
- *Supporting infrastructure development.* Adopt legal, regulatory, and prudential rules that are

consistent with international best practice.

- *Ensuring stock exchanges are well run.* A robust trading environment and supporting infrastructure for trading equities and new financial instruments can also help develop capital markets, although enhancements and innovation need to be properly sequenced.

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A number of the policy lessons arising from the crisis are now beginning to be implemented and many more will need to be formulated and evaluated before coming into effect. The IMF has been active in the debates on a number of items, some of which have been covered in this latest GFSR. While not all the policy recommendations in the April 2008 GFSR are repeated here, they remain relevant. The IMF will continue to cooperate with the FSF, monitor progress, and assist its member countries through its bilateral surveillance, including the Financial Sector Assessment Program, and technical assistance to make their financial systems healthier and more resilient to global financial sector risks.