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Nanyang Technological University
Model United Nations 2012

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[IMF STUDY GUIDE]

Restructuring of the financial institutions

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Section 1: Background and History



Figure 1: IMF Logo

The International Monetary Fund (IMF) is an intergovernmental organization of 186 member countries. Its role differs from that of a national regulatory organization. In the national context, regulation is established by law. Following the provisions and procedures of such laws, the regulator sets and enforces rules that direct and often constrain the behaviour of private agents, such as banks or drug companies. The regulator is directly linked to its government and the government's enforcement powers. In a democratic society the government, in turn, acts over time by the consent of the governed.

By agreement among its member governments, the IMF is charged with regulating the policies and activities of those same governments. The IMF's regulation is largely principles-based rather than rules based. Its principles take the form of formal obligations or informal agreements. In either case, they are implemented by peer-review processes that involve few potential, and fewer actual, penalties for member governments that fail to abide by the agreed principles.

The International Monetary Fund (IMF) plays a substantial regulatory role in the international monetary and financial system. The IMF has been assigned a formal regulatory role in a limited number of areas such as obligations covering exchange rate policies. The Fund has a broader informal regulatory role derived from the voluntary consent of its members such as in surveillance over members' financial sector policies and international payments imbalances. The IMF's regulatory authority derives from its Articles of Agreement. Article I states the IMF's purposes that guide its policies and decisions, such as the promotion of monetary cooperation, the facilitation of the balanced growth of international trade, and the maintenance of a high level of employment and real income. The words in Article 1 are essentially unchanged from those agreed upon at Bretton Woods, New Hampshire, on July 22, 1944.

In July 1944, 45 governments gathered at Bretton Woods, New Hampshire, United States for a United Nation Monetary and Financial conference. The represented governments were in search of an international economic cooperation framework with one aim in mind: To avoid a repeat of the

breakdown in international monetary cooperation that led to the Great Depression in the 1930s. This led to the conceiving of the International Monetary Fund (IMF) with 45 members.

The International Monetary Fund (IMF), or more commonly known as “The Fund”, was established formally in 1945 with 29 members signing the Articles of Agreement of the IMF. As of 2011, the IMF has over 185 member countries.

The Articles of Agreement of the IMF was essentially the guiding principle and listed the guidelines of the organisation. It is in which the purpose of the IMF is listed out:

Article I: Purposes

The purposes of the International Monetary Fund are:

(i) To promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems.

(ii) To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy.

(iii) To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation.

(iv) To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade.

(v) To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity.

(vi) In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.

The Fund shall be guided in all its policies and decisions by the purposes set forth in this Article.

In summary, the IMF was founded with the primary aim of supervising the monetary system, henceforth ensuring exchange rate stability and to eradicate guidelines or rules that can potentially hinder international trade. This council works closely upon the principles and aims set forth in the Articles of Agreement and henceforth, all works and resolutions should follow closely to the guided aims.

1.1 How the IMF works and its role in global economic affairs

For many countries, the IMF has been the organization to turn to during difficult economic times. Over the years this organization has played a key role in helping countries turn around through the

use of economic aid. However, this is only one of the many roles that the IMF plays in global economic issues.



Figure 2: IMF session

Funding

The IMF is funded by a quota system where each country pays based on the size of its economy and its political importance in world trade and finance. When a country joins the organization, it usually pays a quarter of its quota in the form of U.S. dollars, euros, yen or pound sterling. The other three quarters can be paid in its own currency. Generally, these quotas are reviewed every five years. The IMF can use the quotas from the economically-sturdy countries to lend as aid to developing nations.

The IMF is also funded through contribution trust funds where the organization acts as trustee. This comes from the contributions from members as opposed to quotas, and is used to provide low-income countries with low-interest loans and debt relief.

Loans

When a country requests a loan, the IMF will give the country the money needed to rebuild or stabilize its currency, re-establish economic growth and continue buying imports. Several of the types of loans offered include:

1. *Poverty Reduction and Growth Facility (PRGF) loans.* These are low-interest loans for low-income countries to reduce poverty and improve growth for these countries.
2. *Exogenous Shocks Facility (ESF) loans.* These are loans to low-income countries that provide lending for negative economic events that are outside the control of the government. These could include commodity price changes, natural disasters and wars that can interrupt trade.
3. *Stand By Arrangements (SBA).* These are used to help countries with short-term balance of payment issues.
4. *Extended Fund Facility (EFF).* This is used to assist countries with long-term balance of payment issues that require economic reforms.

5. *Supplemental Reserve Facility (SRF)*. This is provided to meet short-term financing on a large scale, like the loss of investor confidence during the Asian Financial Crisis that caused enormous outflows of money and led to massive IMF financing.
6. *Emergency Assistance loans*. These are designed to provide assistance to countries that have had a natural disaster or are emerging from war.

Role of the IMF

The IMF watches the economics and economic policies of its members. There are two main components of surveillance, country surveillance and multilateral surveillance. Through country surveillance, the IMF visits the country once a year to assess its economic policies and where they are headed. It reports its findings in the Public Information Notice. The second way, multilateral surveillance, is when the IMF surveys global and regional economic trends. It reports these twice a year in the World Economic Outlook and Global Financial Stability Report. These two reports point out problems and potential risks to the world economy and financial markets. The Regional Economic Outlook Report gives more details and analysis.

The IMF also helps countries to administer their economic and financial affairs. This service is provided to any membership country that asks for assistance, and is typically provided to low- and middle-income countries. Through the use of technical assistance, the IMF can perform useful surveillance and lending to help the country avoid economic pitfalls which creates sustainable economic growth. Technical assistance helps countries strengthen their economic policy, tax policy, monetary policy, exchange rate system and financial system stability.

As an institution with near universal membership and a mandate that encompasses macro-financial stability, the IMF is uniquely placed to help facilitate, promote, and coordinate appropriate national and multilateral responses to financial crises. The Fund is already actively engaged in this effort, both in the context of its bilateral surveillance, FSAP assessments, programs, and technical assistance; and through its multilateral surveillance, as illustrated by the policy messages drawn in the *World Economic Outlook* and *Global Financial Stability Report*. The Fund is also actively engaged with other international organizations and standard setters to complement their work where appropriate.

According to IMF staff analysis, policymakers need to focus their attention on the following five key goals for financial sector reforms:

- **Ensure a level playing field in regulation.** Global coordination is needed to reap the benefits of global finance; foster competition; and minimize the scope for cross-sector and cross-border regulatory arbitrage, which could be damaging to global financial stability.
- **Improve the effectiveness of supervision.** Strengthened supervision is a necessary condition if a new cycle of leveraging and excessive risk taking is to be prevented. As a result, supervision needs to be more intensive and intrusive, as well as more focused on cross-border exposures.
- **Develop coherent resolution mechanisms at both national level and for cross-border financial institutions.** At the national level, it is critical to have effective policies and procedures for resolving financial institutions in a prompt and orderly manner. The IMF has proposed a “*financial stability contribution*” linked to an effective resolution regime to pay for the fiscal cost of any future government support to the financial sector. Given the global reach of financial institutions, the IMF has also proposed an enhanced cross-border coordination framework for resolution to eliminate moral hazard while preserving financial stability. The first step is to focus now on making this approach operational among a small

set of countries that are home to most cross-border financial institutions. Such an agreement is critical to address the problem of “too important to fail.” Because of the complexity of the issues involved, moving this work forward will require political commitment at the highest levels.

- **Establish a comprehensive macro-prudential framework.** Success in achieving financial stability will depend critically on complementing micro-prudential regulations, which aim to improve the resilience of individual institutions, with effective macro-prudential regulations that strengthen the resilience of the financial system as a whole. This will require identifying, monitoring, and addressing systemic risks generated by the individual and collective behaviour of firms.
- **Cast a wide net.** Reforms must address emerging exposures and risks in the entire financial system, not just the banks. Absent a broader perspective, there is a danger that riskier activities and products will migrate to the less (or un-) regulated segments of the system, as occurred with off balance-sheet investment vehicles during the recent crisis.

Section 2: Overview of the Issue

The International Monetary Fund has been criticizing the European Union’s moves at accepting the Basel III, a new global regulatory standard on bank capital adequacy and liquidity, as they (EU) believe that stronger common standards are required, along with ensuring sufficient flexibility for macro-prudential policies.

With the immediate future of the world economy not looking very bright and the looming possibility of a double-dip recession, it has become the International Monetary Fund’s imperative to create a uniform framework to lay the foundation for restructuring of large financial institutions to ensure that history doesn’t repeat itself.

This council will deal with the mistakes made by different institutions during and leading to the financial crisis and will then propose solutions to prevent reoccurrences.

The acceptance of the Basel III by the European Union will require more than 8,000 banks in Europe to adopt tougher capital requirements set according to the Basel III. With the Basel III falling short of IMF staff recommendations to start with, the IMF has expressed its dismay at the EU for its acceptance of the Basel III.

Difficult questions still need to be answered about the likely (and appropriate) shape of the post-crisis financial system, with the thorniest issue the extent to which markets and policymakers will support global, universal banks, or prefer smaller and narrower institutions. Consideration may have to be given to whether mega- institutions should be discouraged, for example, through additional capital requirements proportional to their contribution to systemic risk or through stricter prudential oversight. Nonetheless, it is probably more important to ensure that the crisis response—including decisions on how to deal with weak institutions and efforts to re-start credit—does not foreclose or unduly increase the cost of the needed transformation. Still, policy responses will have to be consistent with the long-term view of the financial system without exacerbating the present crisis.

2.1 Some criticisms of the Basel III put forth by the IMF

- 1) **Basel III emphasized the need for timely supervisory intervention when banks fail to meet capital requirements.** This requires a review and examination of banks’ risk profiles and

management systems and demand prompt application of prudential measures. However, supervisory intervention is not detailed as under the PCA of the United States. Also, supervisory powers and compliance differ from country to country. For instance, limited information and limited legal powers to intervene may hinder supervisors in some countries.

- 2) **Common standards were too weak** as the commission suggested a maximum harmonisation for the EU on the minimum level of the Basel III requirements.
- 3) **Maximum capital requirements for banks are too weak.**

In particular, it said the Commission had softened its definition of Core Tier I capital relative to the Basel III recommendations in some areas. In light of prevailing balance sheet uncertainties, the lack of EU-wide resolution arrangements and a fully unified fiscal backstop, the Fund called for common standards that will exceed the Basel III minimum.

New Basel III regulation will be phased over the coming years, but much will need to be implemented before the end of 2012.

		Timeline	
Key elements		Processes and IT implemented; readiness to report to regulator	Full compliance required
Capital	New market-risk and securitization framework	Jan 2012	Jan 2012
	Counterparty credit risk	Jan 2013	Jan 2013
	Minimum core Tier 1 ratio	Jan 2013 ²	Jan 2015
	Capital quality	Jan 2013 ²	Jan 2022
	Capital deductions	Jan 2014 ²	Jan 2018
	Conservation buffer	Jan 2016 ²	Jan 2019
Leverage	Leverage ratio	Jan 2013 ³	Jan 2018
Liquidity/ funding	Liquidity coverage ratio	Jan 2013 ⁴	Jan 2015
	Net stable funding ratio	Jan 2014 ⁴	Jan 2018
Remu- neration	Supervisory review of new remuneration policies	Jan 2011	Jan 2011
Risk IT	New requirements on risk IT	Detailed regulation in discussion	

Top priority¹

1 Processes and IT to be implemented before the end of 2012.
2 Reporting of first increase during transition.
3 Monitoring period starts in 2011 (regulator to track underlying components and resulting ratio).
4 Not yet clear when regulator will require reporting of these ratios (dates are estimates from experts); observation period for liquidity coverage ratio starts in 2011 and for net stable funding ratio in 2012.

The financial crisis highlighted the lack of sound liquidity risk management at financial institutions and the need to address systemic liquidity risk—the risk that multiple institutions may face simultaneous difficulties in rolling over their short-term debts or in obtaining new short-term funding through widespread dislocations of money and capital markets. Under Basel III, individual banks will have to maintain higher and better-quality liquid assets and to better manage their liquidity risk. However, because they target only individual banks, the Basel III liquidity rules can play only a limited role in addressing systemic liquidity risk concerns. Larger liquidity buffers at each bank

should lower the risk that multiple institutions will simultaneously face liquidity shortfalls; but the Basel III rules do not address the additional risk of such simultaneous shortfalls arising out of the interconnectedness of various institutions across a host of financial markets. More needs to be done to develop macro-prudential techniques to measure and mitigate systemic liquidity risks.

2.2 The looming possibility of a double-dip recession

A double-dip recession refers to a recession whereby it was followed by a short-lived recovery and followed by another recession. The Gross Domestic Product (GDP) growth of the country can be observed to slide back to a negative value after a short lived positive growth from a previous negative value.

The threat of a double-dip recession is extremely real to various countries and amongst them includes powerhouses like the United States of America (USA), United Kingdom (UK) and various European countries. With stagnant growth rates and sliding GDP, the double-dip recession is within reach and the fiscal policies laid out by the respective countries must counter the prevalent problems before they escalate and turn into a double-dip recession for the countries.

It is the responsibility of this council to guide and advise the countries in threat to formulate international guidelines and also forms of aid to prevent the recessions from happening. The recessions can affect the global economy vastly, threatening the imminent occurrence of yet another global financial crisis.

2.3 Mistakes that led to the financial crises in the past

There were a few factors that have caused for the financial crises of the past.

First, financial institutions and other investors were excessively optimistic about asset prices and risk, lulled by a low interest rate environment and changes in the financial landscape that masked the extent of leverage and made these risks more opaque and interconnected.

Second, neither market oversight nor prudential supervision was able to stem excessive risk-taking or take into account the interconnectedness of the activities of regulated and non-regulated institutions and markets. This was due in part to fragmented regulatory structures and legal constraints on information sharing.

Third, once the crisis hit, weaknesses and differences in national and international approaches to dealing with cross-border bank resolution and bankruptcy came to a head.

And finally, the crisis drove home the limitations of existing mechanisms for central bank liquidity support and the need for significant changes in practice on this front.

2.3.1 1997 Asian Financial Crisis

The 1997 Asian financial crisis was triggered by a sharp depreciation of the Thai baht against the USD. Just before the Thai baht collapsed in July 1997, it had been the target of intense speculative attacks. For a while, the Thai government managed to defend the currency, which had been pegged to the United States (US) dollar. However on 2 July 1997, it announced that it would no longer intervene and would allow the baht to float. The sharp depreciation of the baht against the US dollar began that same day.

This immediately triggered a panic among investors, and other regional currencies such as the Philippine peso, Indonesian rupiah and Malaysian ringgit also began to experience selling pressure. Soon, foreign investors lost confidence in not only the currencies but in those economies that had what they saw as weak fundamentals. In countries most affected by the crisis, banks and other companies collapsed or had to be rescued and many others were forced to downsize, resulting in massive unemployment.

Focus:

- 1) The non-intervention of the Thai government to stop the Thai Baht from floating and as such led to the sharp depreciation of the Baht against the USD.**
- 2) Regional currencies got affected with panic among investors and caused a collective dip in the investor confidence on the currencies in the region.**
- 3) Weak fundamentals were what led to the dip in foreign investor's confidence levels.**

2.3.2 2008 Global Financial Crisis (Great Recession)

The global financial crisis (GFC) or global economic crisis is commonly believed to have begun in July 2007 with the credit crunch, when a loss of confidence by US investors in the value of sub-prime mortgages caused a liquidity crisis. This led to the US Federal Bank injecting a large amount of capital into financial markets and by September 2008, the crisis had worsened as stock markets around the globe crashed and became highly volatile. Consumer confidence levels took a dive as everyone tightened their belts in fear of what could lie ahead.

On September 14 2008, the world witnessed the collapse of the Lehman Brothers. This marked the beginning of a new phase in the global financial crisis. Governments around the world struggled to rescue giant financial institutions as the fallout from the housing and stock market collapse worsened. Many financial institutions continued to face serious liquidity issues.

This was eventually brought into a gloomy financial year for the global economy in 2009.

Focus:

- 1) Credit crunch in 2007 was seemingly the fuse to the eventual financial crisis.**
- 2) Loss of confidence by US investors in the value of sub-prime mortgages, leading up to a liquidity crisis.**
- 3) Highly volatile stock markets worldwide with diving of consumer confidence level, driving down demands.**
- 4) Collapse of Lehman Brothers. The Lehman Brothers was thought to be too big a bank to fail and eventually collapse. This episode has led to the eradication of this perception.**
- 5) Various financial institutions faced serious liquidity issues and governments struggled to bail out giant financial institutions around the world with the collapse in both housing and the stock market.**

6) The profound effect of one economy's downfall upon the global economy.

2.3.3 2011 European Financial Crisis

The government-debt crunch rattled Europe's financial system and weighed on the global economy. Portugal became the third European country, after Greece and Ireland, to require a bailout as its borrowing costs soared. And investors grew worried that countries with much larger debts, such as Spain and Italy, would also need help.

Financial markets were volatile all year as hopes rose and then were dashed that forceful steps would be taken to prevent the financial crisis from becoming Europe's version of the 2008 collapse of Lehman Brothers, which triggered a global financial panic and deepened the Great Recession.

Focus:

1) Debts of sovereign countries can have profound impacts on worldwide economies with the inability of countries to honour debts.

2) In the Eurozone crisis, the debts owed by the troubled countries are amounting to as high as 166% of the country's GDP. And with large exposure of American debt, the growth rate of the America economy will slow down and thereby affecting worldwide trading. This can lead to another possible global recession.

3) Sharp depreciation of the Euro against the dollar will lead to a variety of problems including exports and imports of goods into the Eurozone. This will affect the Euro currency country's growth rate as their currency is tied together and the chaining of the countries can lead to a collective collapse of economies.

As we have seen, international financial crises and periods of high volatility or stress in the international financial system tend to induce countries to consider the potential benefits of collective action to expand the IMF's regulatory role either formally by establishing new obligations, such as those governing exchange rates, or more frequently through voluntarily submitting to informal regulation without associated formal obligations. One important potential area of intensified IMF regulation is the global adjustment process. This is not a new area of IMF involvement.

The global adjustment process is tightly connected with the formal obligations of IMF members. Article I lists facilitating the expansion and balanced growth of international trade and contributing to high levels of employment as one of the Fund's purposes. Under Article IV members undertake the obligation to direct their economic and financial policies toward the objective of fostering orderly economic growth with reasonable price stability. IMF lending programs are intended to mitigate the negative effects of economic and financial crises on the specific member country as well as on other members. The global adjustment process involves the avoidance of policies that promote or sustain international and domestic imbalances in the real and financial sectors. These policies include exchange rate policies as well as other policies. In the area of exchange rate policies, members have formal obligations under the IMF Articles. Thus, the global adjustment process should be central to the IMF's mission as a regulator, broadly defined, both formal and informal.

2.4 What is being done?

A massive deleveraging is already being forced by large losses coupled with sharp reductions in counter-party risk exposures, and it is likely that the post-crisis period will be characterized by a financial system that has lower levels of leverage, reduced funding mismatches (both in terms of maturity and currency), less exposure to counterparty risk, and greater transparency with regard to the financial instruments that are used. Moreover, it is likely that the type, size, and cross-border exposures of institutions and markets that will survive the crisis will be considerably different than before. Consolidation among banks is already underway, and there is already a significant and welcome push to reduce counterparty risk and to improve transparency. Some business models could disappear while others will have to considerably strengthen their risk management in order to survive.

Box 1. The Financial Stability Forum and Its Response to the Financial Crisis

The Financial Stability Forum (FSF) was convened in April 1999 to promote international financial stability through information exchange and international co-operation in financial supervision and surveillance. Working with and through its members, the FSF's mandate is to assess vulnerabilities affecting the international financial system, identify and oversee needed action and improve co-ordination and information exchange among responsible authorities. The FSF presently brings together finance ministries, central banks, regulators and supervisory authorities from major financial centres (G7 plus five)^{1/}; the IMF, World Bank, BIS, OECD, and European Central Bank; the international regulatory and supervisory standard setting bodies, and committees of central bank experts.

In October 2007, the FSF established a senior working group to examine the causes and weaknesses that produced this crisis and to set out recommendations for increasing the resilience of markets and institutions going forward. The FSF report published in April 2008 set out an agenda for regulatory reform to strengthen prudential oversight of capital, liquidity and risk management; enhance transparency and valuation; change the role and use of credit ratings; strengthen the authorities' responsiveness to risks; and make more robust arrangements for dealing with stress in the financial system.^{2/} The report also called for the FSF and IMF to enhance cooperation and complement each other's role in financial stability. In November 2008, the heads of the two bodies issued a joint statement delineating responsibilities and outlining areas of cooperation, including work on an early warning system.

The current status of implementation of the FSF recommendations is provided in Table I. In addition, several FSF workstreams started in 2008 are feeding into the G20 November 2008 Action Plan. For instance, the workstream (WS) on capital procyclicality, jointly with the Basel Committee on Banking Supervision (BCBS), is developing recommendations to address the pro-cyclicality of the regulatory capital framework (Basel II). The WS on procyclicality of bank provisioning practices is examining the use of judgment in existing accounting standards and whether changes in accounting standards and the capital regime are needed to promote more effective through-the-cycle provisioning. The WS on the role of valuation and leverage in procyclicality, jointly with the Committee on the Global Financial System (CGFS), is preparing a set of policy options to reduce the build-up of leverage and maturity mismatches in the system, both via quantitative constraints and adjustments in valuation practices. The WS on compensation is developing principles for sound compensation practices in large financial institutions. The WS on financial crisis management is reviewing recent bank failures and rescues in the context of the 2001 report of the Joint Taskforce on Winding Down a Large Complex Financial Institution and will propose high-level principles for cross-border cooperation on crisis management. The WS on supervisory colleges is monitoring the establishment of colleges for the largest cross-border financial institutions, most of which were set up by end-2008, and will undertake a review of the college arrangements in 2009 once experience with the colleges has been garnered. Reports from these workstreams will be discussed in the March meeting of the FSF and then tie into the G20 process (see Box 2).

1/ Australia, Canada, France, Germany, Hong Kong SAR, Italy, Japan, Netherlands, Singapore, Switzerland, United Kingdom, United States.

2/ Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, available at www.fsforum.org.

Market failures that emerged as a result of financial innovation undermined the effectiveness of a regulatory model that rested, at least in large part, on transparency, disclosure, and market discipline to curb excessive risk taking. Reform of both regulation and supervisory structures is needed to reduce the scope and incentive for regulatory and tax arbitrage, while encouraging continued innovation and the needed restructuring of institutions and markets in a manner that is consistent with strengthened systemic stability.

Section 3: Definition of key terms

European Union: The European Union is a unique economic and political partnership between 27 European countries. Created after the World War II, its primary aim was to foster economic cooperation amongst its members, holding the belief that countries with trade links will not go into conflict against each other, thereby ensuring peace in the Eurozone.

Basel III: A comprehensive set of reform measures designed to improve the regulation, supervision and risk management within the banking sector. This is built upon the Basel I and II. The Basel Committee on Banking Supervision published the first version of Basel III in late 2009, giving banks approximately three years to satisfy all requirements. Largely in response to the credit crisis, banks are required to maintain proper leverage ratios and meet certain capital requirements.

Macro-prudential Policies: A concept in the banking regulation and supervision literature which has to do with defining conditions which can result in financial instability and how to prevent such outcomes through public policy.

Double-dip Recession: When gross domestic product (GDP) growth slides back to negative after a quarter or two of positive growth. A double-dip recession refers to a recession followed by a short-lived recovery, followed by another recession. The causes for a double-dip recession vary but often include a slowdown in the demand for goods and services because of layoffs and spending cutbacks from the previous downturn.

Liquidity: The availability of liquid assets to a market or company. In other words it is the availability of cash.

Government Debt: Aggregate value of bonds and other debt securities issued by a government (or one or more of its authorized agencies) backed by its full faith and credit.

Bonds: A debt security issued by a government to support government spending, most often issued in the country's domestic currency. Government debt is money owed by any level of government and is backed by the full faith of the government. Federal government bonds in the United States include: the savings bond, Treasury bond, Treasury inflation-protected securities (TIPS), and others. Before investing in government bonds, investors need to assess several risks associated with the country such as: country risk, political risk, inflation risk, and interest rate risk.

Debt Securities: Any debt instrument that can be bought or sold between two parties and has basic terms defined, such as notional amount (amount borrowed), interest rate and maturity/renewal date. Debt securities include government bonds, corporate bonds, CDs, municipal bonds, preferred stock, collateralized securities (such as CDOs, CMOs, GNMMAs) and zero-coupon securities.

Liquidity Risk: The risk stemming from the lack of marketability of an investment that cannot be bought or sold quickly enough to prevent or minimize a loss.

Structured Investment Vehicle: A pool of investment assets that attempts to profit from credit spreads between short-term debt and long-term structured finance products such as asset-backed securities (ABS). Funding for SIVs comes from the issuance of commercial paper that is continuously renewed or rolled over; the proceeds are then invested in longer maturity assets that have less liquidity but pay higher yields. The SIV earns profits on the spread between incoming cash flows (principal and interest payments on ABS) and the high-rated commercial paper that it issues. SIVs often employ great amounts of leverage to generate returns.

Special Purpose Vehicle/Entity (SPV/SPE):

1. It is also referred to as a "bankruptcy-remote entity" whose operations are limited to the acquisition and financing of specific assets. The SPV is usually a subsidiary company with an asset/liability structure and legal status that makes its obligations secure even if the parent company goes bankrupt.

2. A subsidiary corporation designed to serve as counter-party for swaps and other credit sensitive derivative instruments. It is also called a "derivatives product company."

Section 4: Causes of the Issue

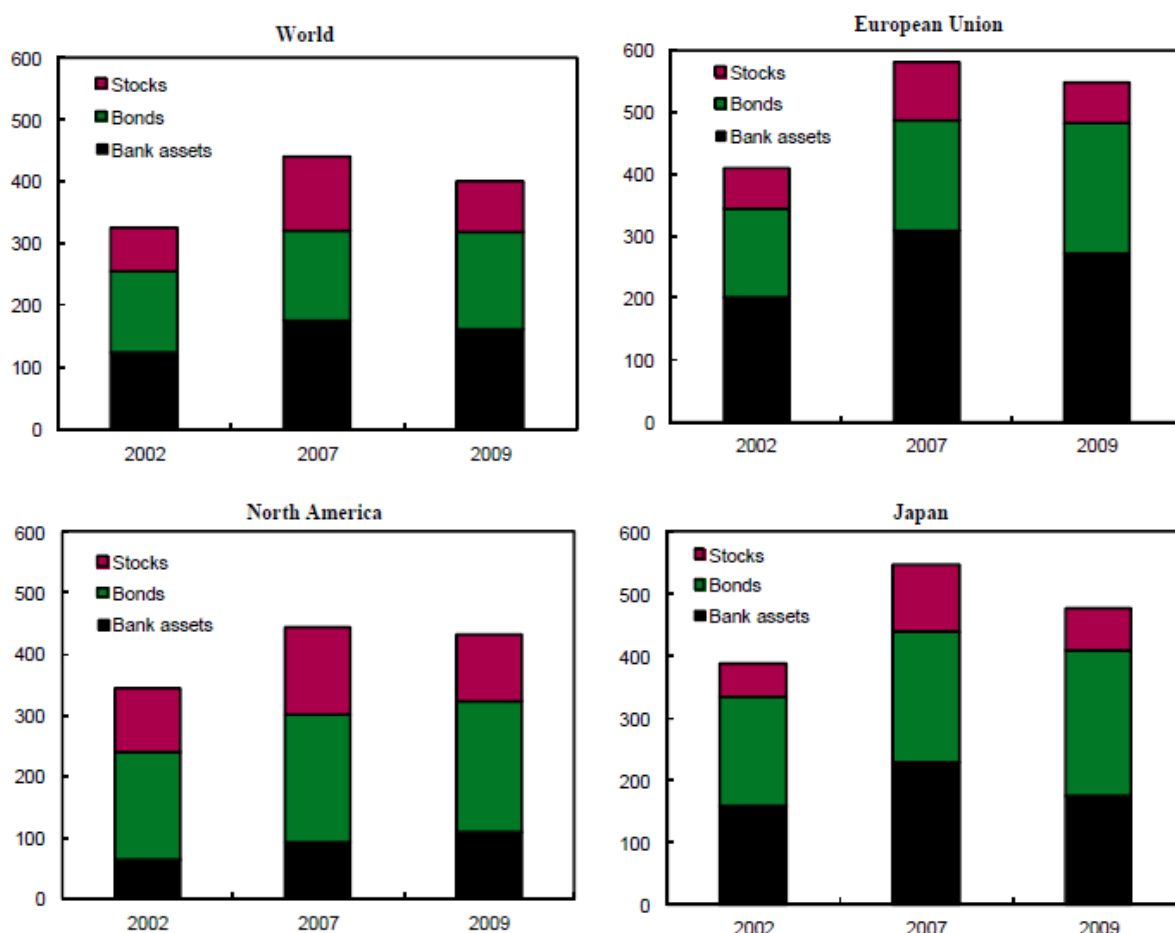
It is now widely recognized that in the run-up to the crisis, there was a significant under-appreciation of systemic risk, so much so that many viewed policymakers as having established an era of sustained and stable expansion—labelled the “Great Moderation.” With the benefit of hindsight, low nominal interest rates, abundant liquidity, and a favourable macroeconomic environment encouraged the private sector to take on ever-increasing risks. Financial institutions provided loans with inadequate checks on borrowers’ ability to pay and developed new and highly complex financial products in an attempt to extract higher returns. Many financial regulators and supervisors were lulled into complacency and did not respond to the building up of vulnerabilities.

As a result, financial systems and transactions became distorted along several dimensions:

- **The financial system grew highly complex and opaque.** Lack of transparency and limited disclosure of the types and locations of risks made it difficult to assess the extent of exposures and potential spillovers. This opacity magnified the shock to confidence as the crisis unfolded. As the financial sector expanded as a fraction of GDP, an increasingly large portion of financial activity did not seem to serve the needs of the real economy.
- **The financial system became over-leveraged and heavily interconnected.** Short-term incentive structures undermined good governance and encouraged excessive risk taking. Actual leverage was even greater than was apparent, in part because it was embedded in instruments in ways that were not transparent and in part because regulatory requirements did not capture key risks. This meant that capital was inadequate as a buffer against the

drop in asset prices. The interconnectedness of institutions meant that the shocks were propagated across the system, both domestically and globally.

- **Liquidity risk was also higher than recognized.** Financial firms and key markets relied increasingly on short-term, wholesale funding and took on excessive maturity mismatches while failing to build adequate liquid asset buffers.
- **Large complex institutions enjoyed the benefits of being “too important to fail.”** The lack of market discipline allowed them to borrow at preferential rates, operate with higher levels of leverage, and engage in riskier activities.
- **In addition to traditional capital market instruments, financial intermediation has increasingly shifted to the “shadow” banking sector.** Relatively unregulated nonbank financial institutions and markets thrived in large part because they avoided the more stringent requirements imposed on banks.



Source: IMF, Global Financial Stability Report, Table 3.

Figure 3: Size of the Financial Sector (in percent of GDP)

Section 5: Challenges to the IMF

IMF needs to focus on defining priorities for action:

- **The perimeter of financial sector surveillance** needs to be expanded to a wider range of institutions and markets, possibly with differentiated layers to allow institutions to graduate from simple disclosure to higher levels of prudential oversight as their contribution to systemic risk

increases. Mechanisms also are needed to allow for the assessment of, and the response to, systemic risks posed by unregulated or less regulated financial sector segments.

- **Prudential regimes** should encourage incentives that support systemic stability; discourage regulatory arbitrage; and adopt a broad concept of 'systemic' risk, factoring in the effects of leverage, funding, and interconnectedness.

- **Capital, provisioning and liquidity norms** should be more demanding in good times to build buffers that in bad times can help to offset procyclical pressures. It will be necessary to develop a methodology to link the stage in the cycle to capital requirements in a non-discretionary way, and to accommodate the demands of accounting and prudential standards.

- Regulators need **better information** on a much wider range of financial institutions, including 'off balance sheet' risks (involving better consolidated supervision), and the risks of financial interlinkages. Investors also need more disclosure and a higher level of granularity in information provided. Careful consideration will have to be given to the costs and benefits of enhanced information collection and disclosure, especially the additional information that regulators require.

- Progress is needed in tackling political and legal impediments to the **regulation and resolution of cross-border institutions**. Developing harmonized insolvency regimes governing the resolution of large cross-border financial firms and early remedial action frameworks would be a desirable feature of a reformed crisis management framework of the future. Absent action on these fronts, the risk is that national authorities will begin to resist financial globalization.

- Greater flexibility for central banks to provide **liquidity** and also to focus greater attention on credit and asset booms is needed. The breakdown of markets has highlighted the need for a better understanding of the monetary policy transmission mechanism, including whether central banks should support liquidity in term markets. For central banks in many emerging market countries, facing capital outflows and exchange rate pressures, the provision of additional liquidity can be more complex as it may fuel a drain of foreign exchange reserves.

- The current crisis underlines the need for **better crisis responses**. Actions taken by national authorities have at times appeared piece-meal and uncoordinated both within countries and internationally, which has risked undermining confidence, weakening the impact of policy responses, and distorting markets.

- Increased concern about credit risk, and the realization of losses, underscores the need for **fiscal support** during the containment and restructuring process. This has included enhanced depositor protection and government guarantees for certain wholesale bank liabilities; bank recapitalization; and in some cases the direct purchase by government or the central bank of bank and other assets.

- **A clear exit strategy** to allow the authorities to withdraw market support and a transition to a new and more stable financial market structure will require careful planning and international cooperation in order to avoid market distortions and to promote a revival of markets at a reasonable level of systemic risk. More work on the approach to this is required by Ministries of Finance, central banks, and regulators.

Other areas where regulations and practices could be re-examined include:

- **Loan-loss provisions should reflect expected losses through the cycle.** To mitigate procyclical effects banks should have the ability and incentives for greater provisioning during upswings when credits are originated, which can be drawn down in downturns. However, the current accounting approach that requires losses to have already been incurred restricts the recognition of future or

expected losses in provisions. There is need for agreement on an international framework which permits banks to undertake such forward-looking provisioning. The current model of ‘dynamic provisioning’ practiced in some jurisdictions provides a good starting point for developing such a framework.

- **Re-calibrate risk weights.** Work is needed to ensure that risk weights and related risk parameters in the capital framework better capture ‘through the cycle’ effects, or the tail risks that have been exposed by the current episode.
- **Introduce a supplementary leverage ratio for banks.** A measure akin to the equity/asset ratio but with enhanced sensitivity to off-balance sheet exposures should be introduced in the capital framework as an upper bound to constrain excessive leverage in the upswing.
- **Allocate valuation reserves for trading book assets.** While maintaining Fair Value Accounting (FVA) as a benchmark, and maintaining full transparency, supervisors could require (and accounting standards should allow) the establishment of “valuation reserves” during periods when market prices deviate rapidly from trend (or possibly an estimate of underlying value), building up a buffer during upswings to be drawn down in downturns. This will lead to more accuracy in the depiction of fair value while being more consistent with good risk management.
- **Adopt more conservative collateral valuations.** Where valuations for the purpose of determining provisions and capital buffers are subject to large margins of uncertainty, they should rely less on contemporaneous market price valuations and include a buffer to withstand normal cyclical downward movements in collateral values. To the extent possible, the adjustments should be forward-looking and based on measurable indicators.

Liquidity risk

Liquidity risk may be procyclical due to its links with market and credit risks, and to “accelerator” factors, such as the mark-to-market effects of asset values and net worth. In many cases, structural reliance on short-term wholesale market funding, including via securitization, has increased the sensitivity of banks’ balance sheets and cost of funds to procyclical elements (credit ratings, market liquidity of assets, and aggregate liquidity).

Regulatory policies need to reflect appropriately the true price of funding liquidity on financial institutions’ balance sheets (including a liquidity risk premium)—ensuring that the market does not rely excessively on central bank emergency liquidity support facilities. Areas that could be considered include:

- **Improved funding risk management.** By strengthening risk management governance and controls, some pro-cyclical tendencies can be avoided. In particular, stress test assumptions and estimates of risks of liquid assets, cash flows, and funding costs need to be more sensitive to firms’ credit ratings and collateral triggers, correlated credit risk events, and funding market breakdowns.⁵ Supervisors will need to ensure adherence to such risk management practices.
- **A minimum quantitative funding liquidity buffer.** A minimum required stock of high-quality liquid assets (less prone to illiquidity in extreme events) could provide some insurance during a downturn or period of market stress. This could be applied to systemically-important institutions, widely defined, and take account of their balance sheet structure (such as the stability of their liabilities).
- **Incentive-based mechanisms.** A requirement to hold high-quality liquid assets would impose costs on financial institutions, could be a relatively blunt instrument and does not necessarily provide a financial incentive to manage liquidity well. Instead, regulatory charges could be introduced for

institutions that present a higher than average liquidity risk. Similarly, the pricing of access to central bank liquidity could be tailored in a way to encourage institutions to hold better-quality collateral.

Information Gaps

- **On- and off-balance sheet exposures:** Supervisors and analysts appear to have been unaware of (or have paid inadequate attention to) the systemic risks posed by the off balance sheet entities (SIVs, SPVs, etc.) sponsored by banks and other systemically important nonbank financial institutions (NBFIs). Even on-balance sheet risks, including that of bank trading books, appear to have been underappreciated and/or reported, in part because of the complexity of products and the lack of granularity and consistency in disclosures. This seems to have reflected insufficient data and understanding of both the size and concentration of exposures, and their inter-linkages across borders and markets.
- **Complex structured products:** Asset valuation techniques and risk models for these instruments were insufficiently developed and unable to capture the distribution of tail losses and price correlations. Specifically, the processes, including assumptions and data used for the calibration of the models and back testing, were not rigorous enough as they were based on an unusually benign segment of the credit cycle. Until the crisis provided an extreme, real-life stress test, the price distributions and cross-correlations of these new, structured products had never been tested by a downturn
- **OTC derivatives:** Insufficient information on prices, traded volumes and concentration in OTC traded instruments inhibited assessments of liquidity and market risk.
- **Leverage:** The monitoring and management of systemic leverage proved to be difficult, owing to the increased use of off balance sheet vehicles, the growth of leverage among systemically important NBFIs, and the increasingly complex web of exposures to other financial institutions.
- **Cross-border and counterparty exposures:** The crisis revealed surprisingly large exposures of non-U.S. banks to the U.S. sub-prime market and to Lehman Brothers, suggesting that the underlying vulnerabilities were under-appreciated by both bank risk managers and supervisors.

Limitations in the early warning frameworks

There are many limitations in the framework used to gauge systemic and institutional risks. For example, standard indicators of financial soundness (FSIs) , while useful in their own right, may be limited as leading indicators of vulnerability. Some widely used FSIs, such as capital adequacy ratios (CAR) depend on the underlying assessment of asset quality, and in the run up to this crisis, understated the risks associated with complex structured products on banks' trading books and off-balance sheet transactions. Moreover, market indicators and measures of financial institution soundness, such as distance to default, were driven largely by contemporaneous information and failed to provide early indications of stress. All this suggests the need to supplement the existing sets of indicators while designing the early warning systems of the future.

		Improve risk models	Improve data quality	Improve risk processes	Optimize accounting policies
Credit risk	Banking book	Continuation of Basel II risk-weighted-asset (RWA) optimization programs			<ul style="list-style-type: none"> Alignment of provisioning policies and other risk policies
	Trading book	Introduction of: <ul style="list-style-type: none"> Internal counterparty risk model (EPE¹) Central counterparties Use of most appropriate models for CVA ²	<ul style="list-style-type: none"> Data quality for optimization and management of CVA² 		
Market risk	Trading book	Optimization of market-risk models: <ul style="list-style-type: none"> Incremental risk charge, eg, identification of optimal correlation matrix granularity Stressed VAR³, eg, identification of core drivers for hedging 	<ul style="list-style-type: none"> Use of historic data for VAR³ and stressed VAR³ calculation Correct segmentation of trading book products 	Improvement of reporting systems (management information systems) and processes to increase internal steering control and manage costs	
Securitization	Banking book	<ul style="list-style-type: none"> Optimization of internal securitization models, eg, asset-class-specific AA⁴ models Leverage on RBA⁵ 	<ul style="list-style-type: none"> Improvement of external rating sourcing/feeds Clear classification of securitizations Ensuring comprehensive hedging, eg, via unique identifiers 	Introduction of pre-calculation data-control processes	
	Trading book	Introduction of internal comprehensive-risk-measure model (vs MRSA ⁶)		<ul style="list-style-type: none"> Optimization of trading and investment strategies Appropriate booking in trading book vs banking book 	

1 External positive exposures,
 2 Credit-valuation adjustments,
 3 Value at risk,
 4 Internal assessment approach,
 5 Ratings-based approach,
 6 Market-risk standard approach.

Section 6: Resolving the Problem

A number of principles that should guide the design of the new international financial architecture:

- full cognisance should be taken of the social costs of the externality of systemic risk, particularly its macro-economic impact;
- homogeneity of market behaviour is a threat to liquidity, particularly at times of high volatility when convention has broken down, it is therefore important to enhance heterogeneity wherever possible;
- Policies formulated will have to be in the scope of the international financial market.

The committee needs to come up with a system in order to achieve the following, but not limited to;

- Instituting a macro-prudential approach to supervision and assigning a clear mandate to a systemic stability regulator.
- Expanding the perimeter of financial sector surveillance to ensure that the systemic risks posed by unregulated or less regulated financial sector segments are addressed.
- Ensuring that prudential regimes encourage incentives that support systemic stability and discourage regulatory arbitrage, and assure effective enforcement of regulation.
- Addressing the pro-cyclicality of existing capital requirements and other prudential norms, preferably in a manner that is rules based and counters the cycle.

- Filling the information gaps, especially with regard to lightly regulated financial institutions and 'off balance sheet' transactions, ensuring that both supervisors and investors are provided more disclosure and a higher level of granularity in information provided.
- Resolving the political and legal impediments to the effective regulation of cross-border institutions, develop special insolvency regimes to be used for large cross-border financial firms, and harmonize remedial action frameworks.
- Strengthening the capacity of central banks to provide liquidity and respond to systemic shocks.
- Improving the capacity of national authorities to respond to systemic crises, including by establishing mechanisms for coordination both within and across borders.
- Establishing the basis for fiscal support during the crisis containment and restructuring phase, and an exit strategy for withdrawing public support and for a transition to a new and more stable financial market structure.

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