

Financial Stability and Supervision Issues

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Abstract

This paper discusses some key issues of financial stability and supervision in general and in the context of Bangladesh financial system. In this connection, the paper focuses on different attributes of financial stability, microprudential and macroprudential approaches of bank regulation and supervision used to address procyclicality in the financial system, and addressing of system risk well ahead of time. Finally the paper outlines the recent initiatives of Bangladesh Bank towards maintaining financial stability. It is expected that the paper would promote informed discussion on key issues of financial stability and supervision of financial institutions and make room for further study on this area.

Keywords: E60, G21, G28

JEL classification: financial stability, macroprudential supervision, procyclicality, systemic risk.

The views and opinions expressed in this paper are those of the author, and not necessarily represent those of the Bangladesh Bank. All errors and omissions remain author's own.

1. Introduction

Financial stability is an explicit mandate of some central banks e.g. Bank of England, Central Bank of Sri Lanka. In some countries it is an implicit mandate alongside other traditional objective, e.g. price stability. Financial stability has gained increased prominence after the global financial crisis that emanated in mid 2007. Prior to the crisis, supervisory stances in a good number of jurisdictions focused mainly on the soundness of individual institutions; systemic perspective was mostly ignored; however, the crisis has given the lesson that such type of regulation and supervision is not enough to address procyclicality and systemic risk in the financial system. A new approach of regulation and supervision has emerged with title "macroprudential policy". Besides, systemic risk management has become key consideration of the policy makers in most of the countries.

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In the context of advanced and emerging countries, studies on financial stability and supervision issues are abundant; however, such works are scanty in the context of developing countries like Bangladesh.

This paper attempts to discuss some key issues regarding financial stability analysis, prudential regulation and supervision, and systemic risk. The paper is structured as follows. Section 2 highlights core concepts related to financial stability. Section 3 focuses on key issues of supervision and Section 4 discusses Bangladesh Bank's recent stability and supervision initiatives. Finally Section 5 states limitation of the study and concludes the discussion.

2. Core Concepts

2.1 Financial Stability

European Central Bank defines financial stability "as a condition in which the financial system – intermediaries, markets and market infrastructures – can withstand shocks without major disruption in financial intermediation and in the general supply of financial services" (European Central Bank, 2015 November).

Bank of Canada defines financial stability "as the resilience of the financial system in the face of adverse shocks that enables the continued smooth functioning of the financial intermediation process" (Bank of Canada, 2015).

Bangladesh Bank defines financial stability as "the resilience of the financial system to unanticipated adverse shocks, which enable the continued smooth functioning of the financial intermediation process" (Bangladesh Bank, 2011).

2.2 Features of Financial Stability

The financial system can be treated as stable if it displays three key features:

- ◆ The financial system is able to efficiently and smoothly transfer resources from savers to investors;
- ◆ Financial risks are assessed and priced reasonably accurately and are relatively well managed;
- ◆ The financial system is in such a condition that it can absorb financial and real economic shocks.

If anyone or a combination of the stated characteristics is/are not being maintained, then it is likely that the financial system is approaching the path of becoming less stable, and at some point might exhibit instability.

2.3 Indicators of Financial Stability

Indicators of financial stability can be grouped into five major categories:

- i) Recent financial market developments;
- ii) Size of price fluctuations ;
- iii) Degree of market activity ;
- iv) Credit conditions, in particular issuer or counterparty spreads;
- v) Triggering or aggravating factors not falling into the above categories.

2.4 Stakeholders in Financial Stability

Stakeholders in financial stability include government, central bank, financial regulator(s), deposit insurers, financial firms, and consumers/public. There are notable differences in their interests and roles (Table 1).

Table I Stakeholders in the Financial System, their interests and roles.

Stakeholders	Their Interests	Their Roles
Government	Low Social Costs	Policy and Legislation
Central Bank	System Stability	Policy regulation and Systemic oversight
Financial Regulator(s)	Institutional Soundness	Supervision
Deposit Insurer	Fund Protection	Risk Monitoring
Financial Firms	Sustainable Business	Prudential Compliance
Consumers/Public	Protection	Awareness

2.5 Costs of Financial Instability

Financial instability may entail a number of costs in terms of GDP, consumption and leverage. Fiscal costs and the impact on GDP (Barrell, Davis, & Pomerantz, 2006);

- (i) Effect of a banking or currency crisis on consumption;
- (ii) Effect of a crisis is aggravated by high leverage, greater in a small open economy;
- (iii) Confidence erosion.

2.6 Requirements for a comprehensive approach to Financial Stability.

Transparency: All participants in financial markets, including the authorities, will have to be more transparent.

Accounting principles must meet recognized standards. Norms or standards of conduct are needed to ratify best practice and to provide market participants with a benchmark against which financial structures and the creditworthiness of those with whom they deal are judged.

Appropriate Incentives. Appropriate incentives are necessary to ensure that market participants make use of the transparency and standards of conduct. To this end, it has to be ensured that adverse outcomes incurred as a result of ignoring available information ended up with losses (Crockett A. , 1998).

2.7 Central Banks' Monitoring Risks of Financial Instability

2.7.1 Typical Risks

- i) If economic growth slows, it becomes more difficult for businesses to repay their loans (owing to falling sales) or for households to repay their mortgages (owing to unemployment), Consequently, banks could incur losses.
- ii) Prices of assets (e.g. securities, real estate or production equipment) could fall or change abruptly, which may create uncertainty on the financial markets, and result in loss of investors' money.
- iii) Banks could grant large loans to a specific industry and then find that they are vulnerable to any downturn in that industry.
- iv) Banks could make large-scale investments in stock or bond markets and then become vulnerable to falling prices in those markets.

2.7.2 Line of Defense

- Prudential regulation (i.e. rules that financial institutions have to comply with in order to ensure effective risk management and the safety of depositors' funds), accompanied by the disclosure of information so as to promote market discipline.
- Prudential supervision (i.e. ensuring that financial institutions follow these rules).
- Monitoring and assessment activities (i.e., identifying vulnerabilities and risks in the financial system as a whole).

2.8 Efficiency and stability of a financial architecture with "Too Interconnected To Fail" institutions

Financial architecture is a network composed of a set of banks and a set of trading relationship between them. In a less concentrated architecture, more banks trigger a large cascade of failures, and it is more difficult to identify these banks ex-ante. It is not optimal to restrict the number of connections of too interconnected-to-fail banks because it can result in a financial architecture that is less efficient, more fragile and harder to monitor (Gofman, 2014). If banks are not sufficiently capitalized, failure of one bank triggers a cascade of bank failure. Since the recent financial crisis, large interconnected banks have

become targets for regulation and policy debates. Volcker (2012) puts emphasis on reducing the risk of failure of large, interconnected banks, by reducing their size, curtailing their interconnections, or limiting their activities.

2.9 Central Banks and Financial Stability - three failures from the experience of the recent crisis

Three egregious failures could be attributed to central banks:

(a) Exclusive focus on price stability

During the years prior to the crisis a powerful intellectual consensus was built around inflation targeting, which was seemingly successful. However, the crisis has blunted that stance and underscored the importance of acknowledging financial stability as an explicit variable in the policy matrix of central banks (Subbarao, 2009).

(b) Failure to prevent asset price bubbles

Benign neglect of the buildup of asset bubbles and financial imbalances are thought to lead to crisis. Indeed, asset price bubbles are hard to identify on a real time basis, and the fundamental factors that drive asset prices are not directly observable. Monetary policy in this respect has been demonstrated to be a blunt instrument (Subbarao, 2009).

(c) Lightness of regulation

A number of factors - innovation of complex products, the originating and distributing mode of lending, misuse of derivative products, securitisation encouraging aggressive off-balance sheet activity, loose supervision and regulation culminated in the buildup of systemic risks. Regulatory arbitrage became a common practice as banks shifted risks to less regulated affiliated entities and thus evaded capital requirements (Subbarao, 2009).

2.10 Global action towards Financial Stability

Strengthening the regulatory capital framework: Recognizing that the banking sector entered the crisis with an insufficient level and quality of capital, the Basel Committee on Banking Supervision (BCBS) has developed concrete proposals to strengthen the quality, consistency and transparency of the capital base of banks.

Developing a global liquidity standard: Considering that illiquidity of banks can threaten its solvency and adversely impact the stability of the financial system, the BCBS developed an international framework for liquidity risk regulation and supervision.

Strengthening the supervision of cross-border entities: Considering the increasing number of cross-border financial conglomerates and their role in transmitting risk, arrangements are being put in place for cross-border cooperation among regulators for establishing supervisory colleges.

Strengthening the macroprudential framework. The BCBS has developed macroprudential regulations to address procyclicality and systemic risk issues.

Reviewing international accounting standards: The Financial Stability Board and the accounting standard bodies are revisiting accounting standards on the ground that they have contributed to market volatility.

Extending the perimeter of regulation: Work is under way on developing a global framework governing the registration, regulatory disclosure and reporting requirements for non-banks and shadow entities.

Strengthening the oversight of credit rating agencies. The crisis has questioned the integrity, conduct and business model of credit rating agencies. Corrective initiatives under way include stronger regulation of credit rating agencies, measures to address conflicts of interest, differentiation between ratings of structured and other products, and strengthening the integrity of the rating process.

Rationalizing compensation structures: proposed changes include promoting compensation schemes that reflect the underlying risks.

2.11 Financial Stability: challenges on the way forward

A number of challenges associated with financial stability are:

- (i) How to define and measure financial stability
- (ii) Financial stability – exclusive or shared responsibility?
- (iii) Growth and financial stability – managing the trade-offs
- (iv) Reforming regulatory architecture
- (v) Fiscal policy, financial stability and central bank independence

2.12 Financial Stability: Micro and Macro prudential Dimensions

The macroprudential dimension aims to limit the costs to the economy from financial distress, including those that arise from any moral hazard induced by the policies pursued. This could take the form of limiting the likelihood of the failure, and associated costs, of significant portions of the financial system. Put loosely, this refers to limiting "systemic risk". In contrast, microprudential dimension aims to limit the likelihood of failure of individual institutions, i.e., "idiosyncratic risk" (Crockett A. D., 2000).

Macroprudential dimension focuses on the risk of correlated failures, pays notable attention to those characteristics of an institution, such as size, that determine its significance for the economy. Microprudential dimension considers each institution in its own right, and is thus not concerned with correlations per se.

2.13 Macroprudential Supervision

Macroprudential supervision refers to the complete process of: (i) monitoring and analysis of the financial system as a whole in order to chart vulnerabilities; (ii) assessing potential threats to financial stability and deciding to take mitigating action, (iii) implementing measures to mitigate vulnerabilities, and (iv) evaluating these actions in order to ascertain to what extent vulnerabilities have been diminished. (De Nederlandsche Bank)

Macroprudential supervision generally seeks to enhance the stability of the financial system by eliminating threats, strengthening the system's resilience and, by crisis management. Of course, macroprudential supervision is subject to a number of challenges:

- **High degree of uncertainty.** It is difficult, though not impossible, to assess vulnerabilities on the basis of exact statistical data.
- **Joint approach involving various policy-makers and various jurisdictions.** This makes decisive action difficult, because of the possible existence of conflicting interests.
- **Making a sound prior assessment of the consequences of the policies pursued.** Due to the complexities of the financial system, developments occur within the same cannot be foreseen. (De Nederlandsche Bank)

2.14 Constraints surrounding Macroprudential Supervision and room for improvement

- a) The powers of policy-makers are limited and are not always in line with actual or perceived responsibilities.
- b) Cooperation among various authorities at home and abroad sometimes involves a trade-off of conflicting interests.

Three major areas offering scope for improvement: (i) the international coordination of macroprudential supervision; (ii) the development of a set of macroprudential instruments, and (iii) testing the effectiveness of macroprudential policies.

2.15 Macroprudential policy in the Central Bank

Central bank is an independent institution that has a lot of expertise in macroeconomic and financial surveillance. Macroprudential policies in central banks offer a number of advantages:

- (i) It offers better information sharing and coordination amongst policy domains.
- (ii) As lenders of last resort central banks have an incentive to reduce the probability of a financial crisis, because they will be the first in line to clean up when the risks materialise.

Macroprudential approaches may also be prone to a number of risks:

- a) It may damage the reputation of the central bank, affecting its independence and credibility, if not conducted successfully;
- b) It may suffer from time-inconsistency problems as ex-post monetary policy will have an incentive to inflate away some of the debt overhangs;
- c) It may undergo political and industry pressures may arise. ex ante macroprudential policies may succumb to political and industry pressures not to lean too much against the boom and rely on monetary policy to solve the problem.

2.16 Program for Monitoring Financial Stability

2.16.1 Systemically Important Financial Institutions (SIFIs)

SIFIs are firms whose distress or failure could disrupt the functioning of the broader financial system and inflict harm on the real economy. They are too interconnected with other financial firms and the real economy because of their large size.

- a) Market indicators, such as equity prices, and expected default probabilities based on estimates of asset volatilities and liabilities, provide market participants' with forward-looking views about an institution's riskiness and are an important complement to balance sheet and supervisory measures.
- b) Three additional types of measures of SIFI systemic risk may address some of the weaknesses of standard measures:
 - i) Supervisory Stress Tests
 - ii) Financial market-based measures of systemic risk as opposed to individual firm risk
 - iii) Network measures of interconnectedness

2.16.2 Supervisory Macro Stress Tests:

Supervisory macro stress tests project whether the largest regulated banking firms have sufficient capital to withstand unexpected adverse macroeconomic and financial conditions.

2.16.3 Financial market-based Systemic Risk Measures

- (i) Conditional Value at Risk (CoVaR) is an estimate of the value at risk of the financial system conditional on a firm's distress, based on co-movement of equity prices in the lower tail of the firm and market return distributions.
- (ii) Systemic expected shortfall (SES) estimates the expected decline in the market value equity of a firm given a market-wide decline in equity prices, and so approximates the propensity to be undercapitalized coincident with the rest of the financial system.

2.16.4 Shadow Banking

Shadow banking generally involves financial intermediation, both credit and maturity transformation, outside the regulated banking system. Such intermediation poses a greater systemic vulnerability when market leverage is high, wholesale short-term funding and maturity transformation is high, and new financial products that transform risks through opaque or not well-understood structures are in proliferation. During the recent crisis, the combination of maturity and liquidity mismatches and credit transformations made the shadow banking system highly vulnerable to various shocks.

Specific aspects of shadow banking that need to be monitored: (i) wholesale short term funding markets; (ii) dealer-intermediated finance; (iii) securitization; and (iv) other new financial products that transform risks.

2.16.5 Asset Markets in the financial system

Asset markets include:

- i) Equity Securities
- ii) Treasury Securities
- iii) Corporate Debt
- iv) Residential Real Estate Prices

Overvalued assets constitute a fundamental vulnerability because the unwinding of high prices can be destabilizing, especially if the assets are widely held and the values are supported by excessive leverage, maturity transformation, or risk opacity.

2.16.6 Nonfinancial Sector

Excessive credit in the private non-financial sector may be an important indicator for the built up of systemic risk. A first-order transmission channel for a systemic financial crisis to affect the real economy is via wealth effects of the household and nonfinancial business sectors. Measures of vulnerabilities in the nonfinancial sector include variables such as leverage, debt service burdens, underwriting standards, new credit extensions for households and businesses. For each sector, it is important to analyze conditions in the tails of the distributions of leverage or net worth due to the fact that households with below-prime credit scores or businesses with speculative-grade rating are more vulnerable than segments with higher income or wealth.

2.17 Policy options in dealing with the Financial Vulnerabilities and Amplification of the Business Cycle:

Policy makers may promote improved understanding of risk. They need to be able to respond to the development of financial imbalances that have adverse implications for the business cycle and financial stability. They also need to coordinate their responses, implement supervisory rules and encourage practices that can reduce procyclicality

without leading to cycle-related frequent changes in supervisory requirements. Supervisors could engage the accounting profession in a more active dialogue and encourage institutions to adopt longer time horizons in their assessments of risk.

Discretionary adjustments in both supervisory instruments and monetary policy have an important role to play in responding to changes in system-wide risk. Such policy responses, however, should probably occur only infrequently and only when major financial imbalances are developing.

3. Supervision Areas

3.1 Risk-based Supervision

According to Australian Prudential Regulation Authority (APRA), "Effective prudential supervision of financial institutions is about risks, rather than rules" (Lewis, 2013). Supervisors following a risk-based approach will aim to:

- Identify systemic risks (affecting all banks).
- Identify idiosyncratic risks (affecting only specific banks).
- Identify those banks in which risks are greatest.
- Identify within each bank those areas in which risks are highest.
- Apply scarce supervisory resources in order to minimize overall risk in the system.
- Engage in a constant dialogue with bank management to judge their effectiveness.

Some drawbacks of risk-based supervision are:

- Legal problems are complex.
- Problem of cost-sharing across countries
- Cross-border supervision/cooperation may be difficult to ensure.

3.2 Crisis Preparedness-contingency Planning

This relates actions concerned with preventing crises and being ready to contain them when they break out. Main focus here is on identifying the tools available for bank resolution and methods for choosing along those tools. Contingency planning is viewed as a major factor contributing to countries' preparedness to face financial instability. Indeed, a comprehensive resolution framework is a vital component for contingency planning. The failure of a systemically important institution should be managed in an orderly manner. Adequate resolution regimes should be put in place to hold down the system-wide loss that arises when such an institution fails.

3.3 Corporate Watch List

Excessive debt of the large corporate groups, whether in the form of loans from banks, debt securities issued to investors, accounts payable to suppliers, etc., poses overall financial stability concerns, as well as concerns about the health of the individual banks and

financial institutions that may be excessively exposed to these firms. To gauge the potential magnitude of this problem and possible consequences for financial stability large corporate groups should be watched meticulously.

3.4 Preconditions for Effective Banking Supervision

Effective banking supervision warrants:

- i) Sound and sustainable macroeconomic policies;
- ii) A well established framework for financial stability policy formulation;
- iii) A well developed public infrastructure;
- iv) A clear framework for crisis management, recovery and resolution;
- v) An appropriate level of systemic protection (or public safety net);
- vi) Effective market discipline.

4. Bangladesh Bank's Recent Initiatives

Bangladesh Bank has taken a number of initiatives in the recent past towards financial stability and effective banking supervision (Bangladesh Bank, 2010, 2011, 2012, 2013, 2014). These are:

- i) Established Financial Stability Department;
- ii) Initiated implementation of 'Contingency Planning and Bank Intervention/Resolution Framework' and 'Lender of Last Resort Framework';
- iii) Appointed Senior Bank Specialist for Banks;
- iv) Developed Financial Projection Model;
- v) Developed Interbank Transaction Matrix;
- vi) Finalized identification methodology of Domestic Systemically Important Banks (D-SIBs);
- vii) Developed a HEAT Map;
- viii) Published Financial Stability Report and Quarterly Financial Stability Assessment Report
- ix) Developed a concept paper on coordinated supervision framework.
- x) Developed framework for implementing a corporate watch list.
- xi) Finalized the framework of countercyclical capital buffer in line with Basel III framework.

5. Conclusion

This paper has discussed key financial stability and supervision issues in general and in the context of financial system of Bangladesh briefly. It is mentionable that prior to the global

financial crisis, like central banks of most advanced and emerging economies, Bangladesh Bank used to apply mostly institution-specific supervision tools to maintain safety and soundness of the licensed institution and thus contributed to maintaining stability of the financial system of Bangladesh; however, after the crisis Bangladesh Bank have made an ambit in its regulatory landscape; management of systemic risk has got utmost attention of the authority.

This paper has not resorted to any empirical investigation and also has not made any thorough discussion on any particular policy tools of financial stability. Nevertheless, it is expected that discussion made here will pave the way of conducting further study/research on financial stability issues in future.

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See Subbarao (2009) for details.