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Thoughts on Banking and Finance

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January-June 2015

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Bangladesh Bank Training Academy
Mirpur-2, Dhaka-1216

BBTA Seminar Papers*

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Robert Patterson	SME Banking Strategy
Robert Patterson	SME Credit Policy & Loan Origination Procedures
Kevin O'Brien	SME Credit Scoring
Jacques Rega	SME Loan Business Process Re-Engineering
Robert Patterson	SME Delinquency Management "Best Practices"
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Editorial Note

Bank supervision is a core function of the central bank in any economy. It promotes an efficient and competitive banking system, prevents the occurrence of unnecessary financial disruptions and builds depositors' confidence. Moreover, the effectiveness of monetary policy depends largely on bank supervision. Strong supervision protects the depositors' money from improper utilization by the borrowers. The more the supervision, the less the chance of default of loans would likely to be. It is widely accepted that high lending rate in developing countries is a cause of high rate of default loans. Bangladesh Bank regularly supervises banks and adopts various kind of supervision polices as and when necessary. In this regard, the effect of bank supervision on loan growth is an area of research.

Recently, interest rates both on deposits and advances in banking system in Bangladesh have declined due mainly to lower domestic investment demand. The gap between lending and deposits rates is the interest rate spread. It is regarded as the cost of financial intermediation which includes basically administrative cost and profits of the banks including corporate social responsibilities (CSR). Therefore, the interest rate on advances depends on the four crucial factors—cost of fund i.e. deposits rate, administrative cost, default rate and rate of profits. In Bangladesh, a question frequently raises by academicians, policy makers and practitioners about why lending rate in Bangladesh is so high and why not it comes down to a single digit. The answer basically lies on four crucial factors in determination of lending rate. Here, an investigation into optimal interest rate on advances is an area of research.

Inflation is a monetary phenomenon which implies that an increase in money supply will result in inflation if other things remain constant—a concept developed by the monetarists. Budget deficit, money supply and inflation channel indicates that inflation increases if government finances its deficit through printing money or increase in reserve money. On the other hand if government finances its deficit through borrowing from bank it will raise rate of interest and ultimately result in inflation through interest rate, investment, output and price level channel. This is question whether government deficit finance crowds out private investment and raises interest rate. The answer is that government's deficit financing from banks may not crowd out private investment if there is excess liquidity in banks. In presence of excess liquidity and not scope of having better investment by banks except investment in government securities, inflationary pressures may come down. Here a research can be done on the cost and benefit analysis of banks' investment on government securities.

After decades of globalization driven growth, global trade growth has now slowed, and is actually trailing global output growth[1]. Therefore, the concept of globalization and liberalization can be revised. Globalization, no doubt, creates opportunity to expand an economy in the globe and is gaining the benefits from the globalization; its external policies need to be liberalized. Bangladesh desires to join in the upper middle income countries by 2021 and for that it needs huge investment including FDI and other foreign inflows for higher GDP growth. Since capital account is not fully liberalized, inflows of FDI and other foreign inflows are not much. Here whether a liberalized policy in the external sector helps foster investment in Bangladesh is an area of research.

The variation in exchange rate and inflation in countries in regions can be given importance while taking macroeconomic policies. Inflation in neighboring countries' or trading partners' help analyses the movement of real exchange rate. If it is found that a country's inflation is greater than its neighboring countries' or trading partners' inflation, its real exchange rate will be appreciated and its trade will be affected. Thus in case of appreciation or depreciation of real exchange rate, a country's nominal exchange rate needs to change. The determination of exchange rate not only depends on demand for and supply of foreign currency but also other economic and non economic factors. Here is an area of research to investigate the influence of these factors on the variation of exchange rate.

The banking sector in Bangladesh has grown many folds since independence in 1971, accompanied by steady and inclusive growth. The sector has undergone successive rounds of major structural and regulatory reforms, supporting the emergence of a vibrant private sector[2]. At present there are 39 private commercial banks are operating and they are occupying the major share in the total deposits as well as total assets in the banking system. However the relative share of every bank in total deposits or assets within this group is very important to judge whether every bank equally contributes to the total deposits or assets. The answer is 'no' because banks are coming into operation phase by phase and thus the older banks have experiences in banking activities and comparative advantages in mobilizing deposits and making assets through lending with expanding branches. However, the new banks have to compete against older banks in collection of deposits and disbursement of loans. Here is an area of research to find out whether the new banks face uneven competition and thus the financial market suffers from imperfections.

Development of SMEs is now a key issue in regard with achieving higher economic growth. Flourishing SMEs needs to create potential entrepreneurs and mobilize resources from savings to investment. Majority of SME entrepreneurs face challenges in capital formulation before setting up enterprise. In conventional practice, bankers are reluctant to provide loans to establish a new SME not knowing about its business performance sufficiently. BB recently has formed a refinance fund for creating new entrepreneurs in the cottage, micro and small sized SME sector. BB's other refinance scheme are also active to development SME sector. In this regard, a study can be conducted on the impact on the loans provided under various refinance schemes for SME sector.

Human resource management is challenging for bankers involved in mobilizing deposits and disbursing loans. BB has introduced KYC system for gathering information on depositors and has formed CIB for collecting information on borrowers. BB also set up Financial Integrity and Customer Services Department for taking quick actions against complains from banks' customers. Now, it is time to collect information of bankers responsible for disbursing loans in unethical manners. In this regard, BB may conduct a feasibility study on creation of a database of all employees in banks involved in the process of sanctioning loans.

These are the topics on which the papers of this issue have tried to address and the main points of the papers are listed below.

The first paper entitled **"Financial Stability and Supervision Issues"** by **Shitangshu Kumar Sur Chowdhury"** focuses on different attributes of financial stability, micro prudential and macro prudential 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 will promote informed discussion on key issues of financial stability and supervision of financial institutions and make room for further study on this area.

The second paper entitled **"Commercial Banks' Interest Rates Behaviour in Bangladesh: A Critical Analysis"** by **Md. Abdur Rouf and Fatema Chowdhury** attempt to analyze the factors influencing lending rate behavior in Bangladesh using ordinary least square method. It finds that consumer price index, excess reserves, deposit rate and policy rate significantly affect lending rate behavior of the commercial banks. Though non-performing loans (NPL) is the most crucial factor in determination of high lending rates, the paper does not find NPL as statistically significant. In the perspective of existing higher lending rate, the paper suggests to take systematic efforts to put in place a reasonable interest rate structure in a sustainable manner taking socio-economic realities into consideration.

The third paper entitled **"Budget Deficit, Money Growth and Inflation: Empirical Evidence from Bangladesh"** by Mohammad Amzad Hossain addresses the issue of the short run dynamics of budget deficit, money growth and inflation within a long run relationship. It finds that there is a unidirectional causality runs on budget deficit to money supply using Granger causality and error correction models as well, which implies that in Bangladesh, budget deficit is monetized by printing money. It also finds that there is a unidirectional causality from budget deficit to money supply and money supply to inflation, which indicates that expansionary monetary policy for accommodating budget deficit has important effect on the inflationary pressure in Bangladesh. The paper finally suggests that maintaining inflation at a tolerable rate budget deficit should be financed by other means than printing money.

The forth paper entitled **"Liberalization and Economic Growth: A Review of the Bangladesh Economy"** by Md. Abdul Wahab, Md. Mazbah Uddin and Nurun Nahar Sultana focuses the benefits of openness by trade and financial liberalization on economic growth in Bangladesh. This paper finds that trade and financial liberalization has promoted economic growth in Bangladesh. It shows that the degree of country's openness in terms of trade share increased to 47 per cent in FY14 from 18 per cent in 1970s. Resultantly, country's exports enlarged to USD 30 billion (21% of GDP) in FY14 from USD 0.46 billion (around 3% of GDP) in 1970s. FDI inflows also accelerated along with the increasing trend of remittances inflows. The country experienced surplus current account balance since FY02 except for a deficit recorded in FY11 and FY12. Nevertheless, foreign reserve position rose to the comfortable level at USD 21.56 billion at end June 2014 that equivalent of 6 months of import payments against USD 1.6 billion at the end of FY00 (equivalent of 2 months of imports).

The fifth paper entitled **"The Impact of Exchange Rate Variation on Inflation in South Asian Countries"** by Md. Omar Faruq examines the impact of exchange rate variation on inflation in South Asian Countries for the sample of 1981 to 2012 in a panel data framework rather than time series in order to investigate whether exchange rate pass-through and/or volatility of exchange rate cause inflation in South Asian countries, and what are the policy implications for these South Asian countries. The paper first estimated inflation model for full sample (for 60 countries) and then for sub-sample model of four South Asian countries (Bangladesh, India, Pakistan and Sri Lanka). For estimation of full sample this paper uses

fixed effect model and GMM estimation techniques. And in case of sub-sample (South Asian case) this paper uses random effect model and GMM estimation techniques. For full sample the paper finds that change in exchange rate have significant impact on inflation but exchange rate volatility have no impact on inflation. However, in case of South Asian countries it finds that both the exchange rate pass-through and volatility of exchange rate has significant impact on inflation. Therefore, the paper suggests that the policy makers of these four South Asian countries should take necessary steps for controlling inflation due to the volatility of exchange rate.

The sixth paper entitled **"Performance Analysis of Selected Local Private Commercial Banks in Bangladesh"** by Kazi Naim Morshed attempts to analyse the performance of private commercial banks (PCBs) in Bangladesh by using multi-criteria performance based index to rank 27 PCBs operating in Bangladesh. The paper considers total profit, return on asset, return on equity, and labor productivity for the year end 2012 as pillars of the performance based index. After construction of performance index, it makes the hypothesis that there is a relationship between bank performance and bank size and tests it through regression analysis. It finds that there is significant positive correlation between bank size and their performance.

The seventh paper entitled **"An Analysis of SME Development Framework of Bangladesh"** by Md. Alamgir attempts to analyse the present regulatory framework of SMEs in Bangladesh for developing SMEs with a view to provide an understanding on the issue in the context of the country. The paper finds that certain issues and options explaining mechanisms and supports related to the SME financing and development with an emphasis on replicating the best practices of the SME-enriched countries which could be a better mode of learning for Bangladesh. Subsequently, practical suggestions and recommendations are presented which can promote greater access to finance and efficient use of funds thereby ensure the sustainability of SMEs.

The eighth and final paper entitled **"Human Resources Audit Readiness of Banks in Bangladesh"** by Md. Masudul Haque tries to identify the current status and the readiness of banks regarding introduction of human resources (HR) audit in the banking sector of Bangladesh. It concludes that HR audit can be introduced in the banking sector of Bangladesh for effective formulation of banks' HR strategies and to achieve superior use of HR.

Rokeya Begum

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References:

[1] Remarks by Governor Dr. Atiur Rahman on 'SDG based Journey Towards Higher Middle Income Country Status Outlined in Bangladesh's 7th Five Year Plan' held in Dhaka on November 15, 2015.

[2] Speech by Governor Dr. Atiur Rahman delivered at the inaugural session of 'Annual Banking Conference 2015' held in Dhaka on November 22, 2015.

Financial Stability and Supervision Issues

Shitangshu Kumar Sur Chowdhury[1]

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 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 includes government, central bank, financial regulator(s), deposit insurers, financial firms, and consumers/public. There are notable difference 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 Netherlandsche 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 Netherlandsche 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.

References

Bangladesh Bank (2010, 2011, 2012, 2013, 2014). *Financial Stability Report.*

Bangladesh Bank. (2011). *Financial Stability Report.*

Bank of Canada. (2015). *Financial System Review.*

Barrell, R., Davis, E. P., & Pomerantz, O. (2006). Costs of financial instability, household-sector balance sheet and consumption. *Journal of Financial Stability , 2*, 194-216.

Bernanke, B. S. (2010, September 2). *Board of Governors of the Federal Reserve System.* Retrieved December 13, 2015, from Board of Governors of the Federal Reserve System: http://www.federalreserve.gov/newsevents/testimony/bernanke20100902a.htm

Crockett, A. (1998, October 22). *Banking Supervision and Financial Stability, The William Taylor Memorial Lecture in Sydney, Australia.* Retrieved December 13, 2015, from Bank for International Settlements: http://www.bis.org/speeches/sp981022.htm

Crockett, A. D. (2000, September 20-21). *Marrying the micro- and macro-prudential dimensions of financial stability. Remarks before the Eleventh International Conference of Banking Supervisors, held in Basel, 20-21 September 2000.* . Retrieved December 13, 2015, from Bank for International Settlements: http://www.bis.org/speeches/sp000921.htm

De Netherlandsche Bank. (n.d.). *Towards a more stable financial system: Macroprudential supervision at DNB.* Retrieved December 13, 2015, from http://www.dnb.nl/en/binaries/Towards%20a%20more%20stable%20financial%20system_tcm47-236522.pdf

European Central Bank. (2015 November). *Financial Stability Review.*

Gofman, M. (2014, March 25). Retrieved Dcember 13, 2015, from http://www.imf.org/external/np/seminars/eng/2014/interconnect/pdf/gofman.pdf

Lewis, D. (2013, June 19). *Risk-based supervision: How can we do better? An Australian supervisory perspective.* Retrieved December 13, 2015, from http://www.apra.gov.au/Speeches/Documents/David%20Lewis%20-%20Risk-Based%20Supervision%20-%20Toronto%20Centre%202013%20June.pdf

Subbarao, D. (2009, September 10). *Financial Stability: Issues and Challenges. Valedictory address at the FICCI-IBA.* Retrieved December 13, 2015, from https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/IFSS100909.pdf

Volcker, P. A. (2012, May 9). *"Too Big To Fail" – the Key Issue in Structural Reform. Statement to the Senate Committee, Subcommittee on Consumer Protection.* Retrieved December 13, 2015, from http://www.banking.senate.gov/public/_cache/files/04eb35a2-68f7-4224-ba1b-cc493f00572a/23C6AE00CC53D93492511CC744028B5E.volckertestimony5912.pdf

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See Subbarao (2009) for details.

Commercial Banks' Interest Rates Behaviour in Bangladesh: A Critical Analysis

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Abstract

Commercial bank's interest rates (lending rates) behavior has become major issue in Bangladesh. It is influenced by factors, such as-reserve requirements, policy rates of Bangladesh Bank, deposit rates, CPI, NSD certificate rates, banks' expenditure income ratio, profitability, liquidity, solvency, monetary and fiscal policy stances, and non-economic factors. In recent times, private sector credit growth was lower than the expected growth mainly due to investors less consciousess and their go slow strategy in the backdrop of political uncertainly. An attempt has been made to analyze the factors influencing lending rate behavior in Bangladesh using Ordinary Least Square Method (OLS). It is found that CPI, excess reserve, deposit rate and policy rate significantly affect interest rates (lending rates) behavior of commercial banks. However, it is commonly believed that NPL is the most crucial factor that forces banks to fix high lending rates. But in our study we have found that NPL is not statistically significant. In the perspective of existing higher lending rate, it is necessary to take systematic efforts to put in place a reasonable interest rate structure in a ustainable manner taking socio-economic realities into consideration.

Section 1: Introduction

Commercial banks' interest rates (lending rates) behavior has become a major issue in recent years considering its importance in economic growth and development of the country. In this context, banks should have the potential, scope and prospects for mobilizing financial resources and allocating them to productive investments efficiently. Commercial banks' lending rates behavior is influenced by so many factors such as policy rates of central bank, reserve requirements, deposit rates, profitability, liquidity, solvency, investment climate, fiscal and monetary policy stances. The regulatory requirements may impinge on banks' balance sheet and thus, influence their optimal lending rate response to the policy interest rate (Dhal,2010). It is observed that commercial banks in a country generally adjust their lending rates in tandem with the central banks' policy rates for an effective transmission of monetary policy through the interest rate channel. In contrast to the traditional interest rate channel, the banks focus on two necessary conditions for the existence of the bank lending channel-ability of monetary policy to affect the bank loan supply and the dependency of borrowers on bank loans. Besides, the lending behavior is also affected by political influences, especially for the state-owned banks. In full compliance with the stipulated regulations, the banks resort to prudential guidelines to

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avoid failures and to enhance efficiencies in their lending activities especially by maximizing their profit.

The banking sector of Bangladesh comprises of four categories of scheduled banks: 4 state-owned commercial banks, 39 private commercial banks (PCBs), including 7 Islamic banks, 4 development financial institutions (DFIs) and 9 foreign commercial banks (FCBs). Since FSRP in 1996, the banking sector of Bangladesh has been undergoing gradual transition processes which have impacts on banks in fixing deposit and lending rates. Bank's lending rates in Bangladesh are said to be higher and do not create favorable environment for the growth of private sector credit and, investment demand and hence retard economic growth. It is observed that there is an existence of comparatively high interest rate spread (IRS) in the banking sector of Bangladesh which raises concern among the policymakers and the business community with the apprehension that high IRS impedes private investment which indicates the inefficiencies in the banking system. In other words, it can be said that high IRS means low deposit rates which discourages savings and reduces the availability of loanable funds. The persistence of non-performing loans is one of the major problems of the banking sector in Bangladesh which is viewed as an obverse mirror image of the ailing banking industry.

The main objectives of the paper are a) to analyze the interest rates (lending rates) behavior of commercial banks in Bangladesh; b) to examine the factors that influence the lending rates behavior; and c) to identify the causative factors responsible for lower private sector credit growth in Bangladesh in recent times.

This research paper is divided into seven sections. Section 1 gives introduction while section 2 provides literatures on previous studies related to the research topic. An overview of lending rates behavior in Bangladesh is discussed in section 3. Section 4 presents current status of interest rate in Bangladesh. Methodology of the research is presented on section 5. Section 6 discusses estimation results. The last section draws concluding remarks.

Section 2: Literature Review

A lot of studies have been done in the area of interest rates (lending rates) behavior of banks due to its importance and the issues surrounding it. According to Adedoyin and Sobodun(1996), " lending is undoubtedly the heart of banking business. Therefore, it's administration requires considerable skill and dexterity on the part of bank management."

Commercial banks' behavior in setting their deposits and lending rates significantly influences effectiveness of monetary authority in its policy making. Banks may set their lending rates as some mark up or premium over the deposit rates. If the premium is perceived to be too high or too low, the market force will compell banks to adjust back to some equilibrium spread (Thompson, 2006)

According to Benkovskis, (2008)" a change in policy–induced interest rates influences the

real economy by affecting various relative prices. A higher cost of capital increases the returns required for an investment project and therefore, diminishes investment expenditures. Changes in interest rates also affect consumption, as higher interest rates decrease the price of future consumption. However the interest channel theory ignores some important processes in the banking sector. The existence of the bank lending channel has a very important implication for monetary policy: the transmission process of monetary policy depends on the structure of the financial system. This means that structural changes in financial era may affect monetary transmission

A.K. Kashyap and J. C. Stain (1995) argue that the effect of monetary policy on the bank loan supply depends on the regulatory framework, as risk-based capital requirements can tie a banks' ability to extend loans to it's level of equity capital and constrain lending. The speed of monetary transmission depends on bank loan maturity and interest rate type. The bigger the share of short-term loans with a floating interest rate, the faster the response of loan supply to changes in monetary policy will be.

The interest rate spread is one of the important determinants of the banking system's efficiency. According to Mujeri & Younus (2009) " the IRS reflects the cost of intermediation activities including the operating costs and liquidity risks that the banks bear in linking the savers and investors". In addition, banks in Bangladesh incur several other costs which are relatively high, such as cost of non-performing loans (NPLs), administrative & incidental costs including expenses that the banks incur in setting up new branches, attracting & retaining skill personnel, advertising, and other expenditures that the banks undertake to increase market share & business. Regarding higher lending-deposit rate spread in Bangladesh's banking sector, Farasuddin (2005), Mujeri & Islam (2008) are of the opinion that high interest rate spread is largely the outcome of inefficiencies & lack of competition in the banking system. The factors that contribute to the persistence of high IRS, it is important to focus on variables which influence the decisions of the banks regarding the levels at which the deposit and lending rates would be set. In practice, such factors could cover elements which are both internal & external to the banking sector. Within the market determined interest rate policy regime, tools available to Bangladesh Bank for influencing the interest rate structure is somewhat limited in number so that it would be useful to urge the banks as well as to become more aware of and responsive to their corporate social responsibility .Moreover, a more coordinated use of fiscal policy is essential so that the burden of reducing the IRS does not fall on monetary measures alone.

BB's recent Study(2014) on "Lending Rates Behavior in Bangladesh: Some facts and Determinants", shows that bank deposit rates i.e. cost of fund is one of the main determining factors that affects lending rate of banks in Bangladesh. It is found from the study that if deposit rates increased by 100 basis points SCBs and FCBs will adjust lending rates by more than 100 basis points (by 135 basis points and150 basis points respectively).

While for FCBs and SPBs, 100 basis points increase in deposit rates will increase lending rates by 85 and 63 points respectively. Both 3 year and 5 year NSD certificate rates affect the lending rates for all groups of banks except for FCBs. The lending rates increase by 24, 28 & 17 basis points respectively for 100 points increase in the 3 year NSD certificates rates for SCBs, PCBs and SPBs. Only FCBs consider repo and reverse repo policy rates while determine the lending rates by 34 basis points due to 100 basis points increase in the lending rate. It is suggested in the study report that the threshold level of the lending rates lies within the range of 11.5-12.0 percent above which the private sector credit growth of Bangladesh may be adversely affected. A minimum level of weighted average deposits rate of 5.6 to 5.7 percent is also suggested in this study and after that level an increase in the deposit rate will increase the lending rate.

A seminar paper (presented by the BB study group, June 2014) titled 'A Comparative Analysis of Interest Rate Spread in the Banking System" has pointed out that the higher lending rate and the lower deposit rate offered by some PCBs and FCBs led to a high spread in the banking system of Bangladesh. It is suggested in this seminar paper that WAIS method excluding SME is the best method for monitoring IRS on monthly basis as this method measures intermediation costs which better reflects comparison of intrinsic bank efficiency.

Regarding the lending rates behavior, a presentation titled "An Analysis of Recent Slow-moving Credit Flows" by BRPD, BB (10 July 2014) has drawn attention to the fact that in recent times, borrowers and investors seemed not to be confident enough on overall investment climate which led to lower demand for credit. Besides, banks are over cautious and hesitate to persuade fresh lending and availability of cheaper foreign fund lessened credit demand further. All these factors ultimately resulted in slow-moving economic activities as pointed out in the presentation of BRPD.

A preliminary findings of a BB Survey Report on Loan against Trust Receipt (LTR, June, 2014) has pointed out that there is a tendency of banks to convert the LTR into term loan by exercising malpractices of LTR facility in their lending behavior which have a negative effect in the banking system.

Section 3: An Overview of the Interest Rates Behavior in Bangladesh

Bangladesh had a comprehensive system of controls on the level and structure of interest rates until 1990. The administered nominal rate structure was changed infrequently with changes in inflation. While deposit rates during the period 1985-90 were relatively very high in real terms, nonetheless, the relationship between deposit & lending rates and the complexity & rigidity of administered interest rates undermined the role of interest rates in mobilizing savings to meet investment demand & in allocating investible resources efficiently among competing users. Under the administered interest rate regime, Government clearly attempted to provide positive incentive to savers and at the same time attempted to keep lending rates low in order to keep investment cost low. An important

effect of this potentially conflicting policy objective had been to squeeze commercial banks' margin and reduce their incentives to mobilize deposits. In view of the disadvantages of this policy, BB moved to a market-oriented approach to interest rate determination with deposit rates that better reflect market forces & lending rates that influence cost of funds and intermediation costs & risks. With liberalization towards a market-oriented interest policy under the FSRP which became effective in January 1991, banks are allowed to set lending & deposit rates within bands set by BB. All deposit rates were decontrolled except for DPS and some special rates for short-term deposits. On the other hand lending rates are all freely determined by the market except for agriculture, small industry and exports. Subsequently, the bands are removed allowing the banks to set interest rates independently with effect from February 19, 1997. Further flexibility in the interest rate policy was introduced from July 12, 1999 permitting banks to differentiate interest rates to individual borrowers except for lending to exporters only. Apart from the conventional deposit and lending rates, the Islamic banks in Bangladesh have been carrying on their banking transactions in line with the Islamic shariah systems of interest-free policy. Under this policy, modes of investment of the bank are done through bai-murabaha,bai-muajjal' hire purchase under shirkatul melk, mudaraba, musharaka, bai-salam, bai-as-sarfs according to a pre-agreed profit sharing ratio to ensure a reasonably fair rate of return.. It has been observed that despite liberalization, interest rates are not fully responsive to market conditions because of several rigidities in the banking system, including directed lending to priority sectors and to state-owned enterprises. In this perspective, the current decade witnessed some major policy shift as BB introduced Repo in July 2002 and Reverse repo in April 2003 and reintroduced Bangladesh Bank Bill in 2006 as policy instruments for influencing financial sector.

BB introduced the risk-based capital adequacy framework for banks from January 2010 as a regulatory compliance with a view to ensuring that banks are accurately assessing all material risks they are exposed to & maintaining the required capital commensurate with their risk profile. Banks are required to maintain the capital adequacy ratio at greater than or equal to 10 percent of risk- weighted assets. Meanwhile, BB has declared the Roadmap and Action Plan of the phase in arrangements for Basel-III.

Near the end of FY13, BB changed its policies on loan classification and loan-loss provisions. It has been observed that the SCBs and DFIs continue to have high level of NPLs mainly due to substantial loans provided by them on considerations other than commercial criteria. Poor appraisal and inadequate follow-up and supervision of the loans disbursed by the SCBs and DFIs in the past eventually resulted in these poor quality assets. Furthermore, these banks were reluctant to write-off the historically accumulated bad loans because of poor quality of underlying collaterals. Recovery of NPLs, however, has witnessed some signs of improvement, mainly because of the steps taken with regard to internal restructuring of these banks to strengthen their loan recovery mechanism and recovery drive and write-off measures initiated in recent years. In FY 13, due to BB's

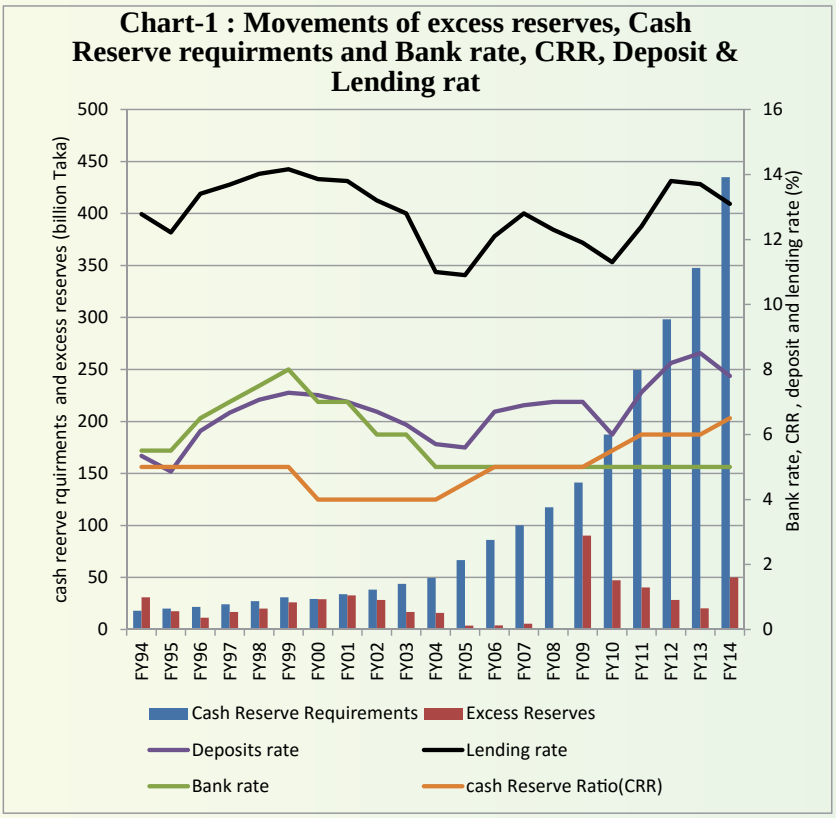
temporary relaxation in the loan scheduling standard, the amount of rescheduling loans skyrocketed.

It has been observed that undue political influences on state-owned banks in Bangladesh are very strong than that of the private banks. These banks are very much sensitive to the decision of the government and disburse loan to many politically connected individuals, enterprises, or even to prominent political figures which ultimately turns into non-performing loans to a greater extent.

Section 4: Current Status of Interest Rates

The weighted average lending rate declined to 13.10 percent in FY14 from 13.67 percent in FY13. The deposit rate also declined to 7.8 percent in FY14 compared to 8.5 percent in the preceding year. The large excess liquidity in the banking system resulted in lowering the deposit rate. The trends of the spreads between lending and deposits rates were above 5 percent from FY10 to FY14. The interest rate spread (nominal) was stood at 5.31 percent in FY14 compared to 5.13 percent in the preceding year where the real spread was -1.99 percent during the same period (Chart-1). The weighted average lending rate of banks declined to 12.8 percent at the end of August from 13.6 percent a year earlier. In addition to lower private credit demand, higher competition among banks contributed to the decline in the lending rate. The deposit rate also declined to7.6 percent from 8.6 percent, remaining positive in real terms as it was still higher than inflation. The large excess liquidity in the banking system contributed to the lower deposit rate. The interest spread of the banking system widened marginally to 5.1 percentage points from 5.0 in August 2013. Due to slower private credit growth, liquidity in the banking system remained high despite the cautious monetary stance and significant sterilization operations conducted by BB. Excess liquidity in the banking system stood higher at TK. 1.5 trillion at the end of August 2014 compared to TK.823.2 billion a year earlier.

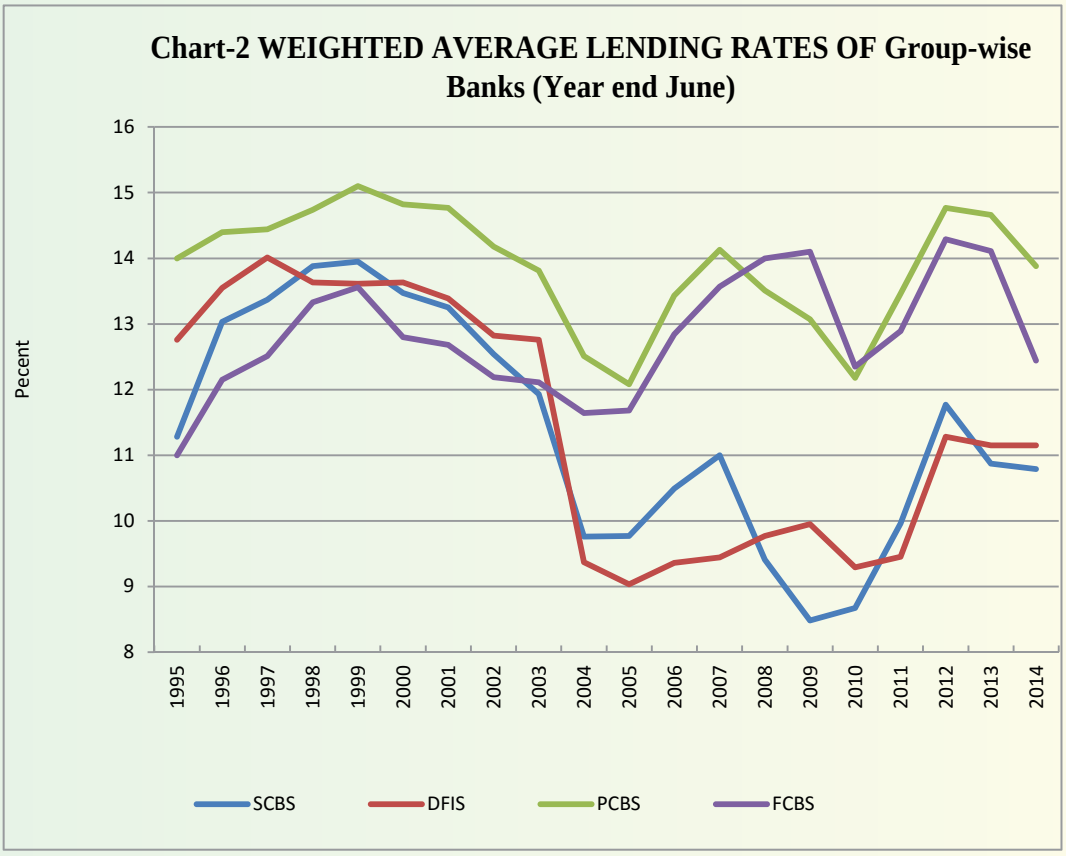
The foreign borrowing during the last couple of years was too small compared to the domestic borrowing by the entrepreneurs from the local banks. But regarding lending rates, they are not at all competitive as compared with interest on lending by their foreign counterparts. Because of higher cost of fund, the local banks would not be able to offer such low interest rate which creating threats to the domestic banks as some banks with high lending rates may face the problem of excess liquidity if foreign sources of borrowing become gradually available to all potential investors. It has been observed that lending rates of local banks are around 12-15 percent while for foreign borrowing the rate is 3-4 percent plus LIBOR. As the interest rates offered by local banks on term deposits are much higher than the rates on external borrowing, this may encourage some borrowers to deposit funds in the local banks borrowed from outside to earn some easy profit.



The weighted average lending rate of SCBs, DFIs, PCBs and FCBs were 10.79, 11.15, 13.88 and 12.44 percent respectively in FY14 where deposit rates were 7.19, 9.47,7.94 & 4.52 percent respectively compared to SCBs, DFIs, PCBs and FCBs the preceding year. The nominal interest rate spreads were 3.10, 1.68, 5.94 & 7.92 respectively for SCBs, DFIs, PCBs and FCBs during the same period (Chart-2).

It is mentioned in the Monetary Policy Statement (MPS) of BB (January-June 2015) that Bangladesh Bank will endeavour to reduce the existing spread of 5.2 percent between lending and deposit rate so that the lending rate can be pulled down to incentivize the investors. The business community views the existing average lending rate of 12.5 percent as high enough to dampen investment vigour. However, reducing interest rates will bring inflation down further. Otherwise real deposit rates will be negative, discouraging domestic savings and making investment finance inadequate. Bangladesh Bank urges the commercial banks to device ways to reduce the lending rates which did not come down along with inflation correspondingly. The MPS has also drawn attention to the fact that inflation dropped by almost 5 percent age points since the end of 2011, but the average lending rate dropped by only 1 percentage point since then, empowering the banks to earn

higher real rates of interest and thus making investment more expensive than before.



It is opined by many that NPL is the most crucial factor that forces banks to fix high lending rates and high nominal spreads in order to recover past loan losses. It has been observed that the ratio of NPL to total loans of all the banks had shown an overall declining trend from its peak (34.9 percent)in 2000 up to 2011 before it increased to 10.0 percent in December 2012. The ratio further increased to 10.8 percent at the end of June 2014. The rise in the gross NPL ratio has been attributed in part to the high NPL of the SCBs and the DFIs, and also due to the reasons of issuance of the circular regarding new classification and rescheduling of loans and a few notable scams in the banking industry. The SCBs and DFIs continue to have high level of NPLs mainly due to substantial loans provided by them on considerations other than commercial criteria. Furthermore, these banks were reluctant to write-off the historically accumulated bad loans because of poor quality of underlying collaterals. The NPLs for PCBs & FCBs are significantly lower than SCBs. Though the macroeconomic indicators showed better performances in FY 14 but

the banking sector's classified loan increased steadily during the year .It's a matter of concern that the banks' capital adequacy ratios are shrinking with the rising bad loans when implementation of the BASEL-III is under process.

Regarding policy rates, the rate of interest for repo, special repo and LSF remained unchanged at 7.25 percent, 10.25 and 7.25 percent respectively for 1-2 day tenor till to date. On the other hand, interest rate against reverse repo remained unchanged at 5.25 percent during the same period. Bank rate remained unchanged at 5.00 percent which has been in effect since 6 November 2003.

The Cash Reserve Requirement for the scheduled banks with the Bangladesh Bank has been increased by 50 basis points to 6.50 percent of their total demand and time liabilities with effect from 24 June 2014. The statutory liquidity ratio(SLR) for the conventional banks shall not be less than 13.0 percent of their total demand and time liabilities, and for the shariah based Islami banks, this rate shall not be less than 5.5 percent. This has been in effect from 1 February 2014.

Private sector credit growth during FY14 was 12.3 percent which was lower than the programmed growth of 16.5 percent mainly due to investors had been a bit conscious and followed a go slow strategy in the backdrop of political uncertainty, cautious lending practices by banks following scams in few banks, strong supervision activities by BB and facilitation of private sector trade credit from abroad.

Section 5: Methodology and Sources of Data

5.1. Sources of Data

Data used in this paper is secondary in nature and are taken from various issues of Annul Report and Monthly Economic Trends of Bangladesh Bank. Data duration is 1994-2014.

5.2. Formulation of Empirical Model

The model is specified implicitly below:

$$LENR = f\,(CPI,\ CRRQ,\ NPL,\ EXP\_INCOME\_RATIO,\ RETURN\_ASSET,\ EXCESS\_RESERVE,\ DEP\_RATE,\ NSD\_CERTI,\ GDP,\ POLR,\ Z) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$

Where Z contains other variables not explicitly included in the model. The explicit form of equation (1) is:

$$LNR=\alpha 0+\alpha_1 CPI+\alpha_2 CRRQ+\alpha_3 NPL+\alpha_4 EXP\_INCOME\_RATIO+\alpha_5 RETURN\_ASSET+\alpha_6 EXCESS\_RESERVE+\alpha_7 DEP\_RATE+\alpha_8 NSD\_CERTI+\alpha_9 GDP+\alpha_{10} POLR+\mu$$

Where,

LNR = Lending Rate
CPI = Consumer Price Index

CRRQ = Cash Reserve Requirements
NPL = Ratio of Net Non-Performing Loan to Total Loans
EXP_INCOME_RATIO = Expenditure Income Ratio
RETURN_ASSET= Return on Assets
EXCESS_RESERVE = Excess Reserve
DEP_RATE = Deposit Rate
NSD_CERTI= National Savings Certificate
GDP = Gross Domestic Product
POLR = Policy Rate
Error Term

Section 6: Estimation Results and Analysis

According to Gujarati (2004), most macroeconomic time series are not stationary at levels. This implies that most ordinary least squares (OLS) regressions that are carried out at levels may not be reliable. Giving this knowledge, testing for stationary of variables to obtain a more reliable result becomes very essential. This research paper carried out stationary test of the variables using Augmented Dickey-Fuller (ADF). First, unit roots for all variables at levels are tested. It is found that all the variables contain unit roots at levels. However, when first difference is used, it is found that variables used in the research are stationary (Table 1).

Table 1: Unit Root Test and First Difference Test of Variables

Variables	Level	First Difference
LNR	I(0)	I(1)***
CPI	I(0)	I(1)***
CRRQ	I(0)	I(1)***
NPL	I(0)	I(1)***
EXP_INCOME_RATIO	I(0)	I(1)***
RETURN_ASSET	I(0)	I(1)***
EXCESS_RESERVE	I(0)	I(1)***
DEP_RATE	I(0)	I(1)***
NSD_CERTI	I(0)	I(1)***
GDP	I(0)	I(1)***
POLR	I(0)	I(1)***

Estimation results of the research paper are presented in Table 2.

Table 2: Estimation Results

Dependent variable: Lending Rate; Number of observations=17; F(10,6)=11.34; Prob>F=0.0038, R-squared =0.9497; Adjusted R-Squared=0.8660; Root MSE: 0.29246				
	Co-efficient	**Std.Err**	**t**	**p>|t|**
CPI	-0.11**	0.04	-2.61	0.04
CRRQ	-0.00	0.00	-0.66	0.53
NPL	0.07***	0.03	1.93	0.10
EXP_INCOME_RATIO	-0.08***	0.04	-2.08	0.08
RETURN_ASSET	-0.73	0.39	-1.88	0.11
EXCESS_RESERVE	-0.02**	0.00	-2.81	0.03
DEP_RATE	0.97*	0.18	5.50	0.00
NSD_CERTI	-0.06	0.10	-0.61	0.56
GDP	-0.06	0.18	0.37	0.73
POLR	0.15**	0.07	2.40	0.05

Note: * Significant at 1% confidence interval; ** Significant at 5% confidence interval; ***

Significant at 10% confidence interval

From the estimation results, it is found that CPI, excess reserve, deposit rate and policy rate significantly affect lending rate behavior of banks. Deposit rate is positively correlated with banks' lending rates behavior and a change in deposit rate will yield higher change in banks' lending rate. Increase in the deposit rate also results in the increase in the cost of funds of the banks, therefore, in order to minimize the cost of funds of the banks, banks raise interest rate. Policy rate is also found positively correlated with banks' lending rate which implies that monetary policy significantly affect on banks' lending rate. If policy rate increases then it increases the lending rate which has also incidence on money market rate. It is found that CPI and excess reserve are negatively correlated with lending rate behavior of banks. Depressed investment scenario and business largely contribute the low demand for funds from banks. Variables such as cash reserve requirements,

non-performing loan, expenditure income ratio, return on assets, excess reserve, national saving certificate and gross domestic product does not have significant relationship with lending rate. This may be because of other non-economic factors like corruption, political influence, political uncertainty and over cautious lending practices by banks.

Section 7: Concluding Remarks

Commercial banks interest rates (lending rates) behavior has become a major issue in recent years. Commercial banks’ lending behavior is influenced by many factors such as interest rate, deposits, investments, profitability, liquidity, solvency and monetary policy stances. It is commonly believed that NPL is the most crucial factor that forces banks to fix high lending rates and high nominal spreads in order to recover past loan losses. But in our study we have found that NPL is not statistically significant. This may be because of non economic factors are influencing banks lending behavior. The SCBs and DFIs continue to have high level of NPLs mainly due to substantial loans provided by them on considerations other than commercial criteria. It has been observed that undue political influences on state-owned banks in Bangladesh are very strong than that of the private banks where state-owned banks disburse loan to many politically connected individuals, enterprises, or even to prominent political figures which ultimately turns into non-performing loans to a great extent. Recently, there has been a tendency of some banks to convert the LTR into term loan by exercising malpractices of LTR facility in their lending behavior. In the recent times, private sector credit growth was lower than the expected growth mainly due to investors has been a bit conscious and followed a go slow strategy in the backdrop of political uncertainty, overcautious lending practices by banks following scams in few banks, strong supervision activities by BB and facilitation of private sector trade credit from abroad. Commercial banks should adjust their lending rates keeping harmony with BB's policy rates for an effective transmission of monetary policy through the interest rate channel. It is felt that banks should cut interest rate on loans with a view to creating an investment- friendly environment in the country. Besides, there is a need to take systematic efforts to set a reasonable interest rate structure in the banking sector in a sustainable manner considering socio-economic realities of the country.

References

Adedovin and Sobodun , “Commercial Banks' Lending Activities in Nigeria".1996

Bangladesh Bank. Annual Report (various issues).

Bangladesh Bank, “Monthly Economic Trends” (various issues).

Bangladesh Bank, “Monetary Policy Statement”(various issues).

Bangladesh Bank, “Seminar Paper Presentation: A Comparative Analysis of Interest Rate Spread in the Banking System”. 2014

Bangladesh Bank, "Seminar Paper Presentation: Lending Rates Behavior in Bangladesh: Some facts and Determinants". 2014

Bangladesh Bank, "Seminar Paper Presentation: Preliminary findings of a Survey Report on LTR". 2014

Bangladesh Bank, "Seminar Paper Presentation: An Analysis of Recent slow-moving Credit Flows."

Benkovskis,K.. "Is there a bank lending channel of monetary policy in Latvia? Evidence from bank level data, LATVIJAS BANKA".2008

Dhal, SC, "Regulatory Requirements and Commercial banks' lending rate: some theoretical perspectives". Banks and Bank Systems ,Vol-5, Issue-2, 2010.

Farasuddin, M. . "Monetary Policy and Financial Sector Reforms". Independent Review of Bangladesh Development (IRBD), 2005

Gujarati, D.N. Basic Econometrics. New York City: McGraw-Hill-Education.2004.

Kashyap, A and Stein, J , "The Impact of Monetary Policy on Bank Balance Sheets".Carnegie-

Rochester Conference Series on Public Policy, vol-42, issue-1, 1995.

Mujeri, M.K. & Islam, M.E, "Interest Rate Spread in the Banking Sector: Some Policy Suggestions". PAU, Bangladesh Bank, 2008.

Mujeri, M.K. & Younus, S. "An Analysis o Interest Rate Spread in the Banking Sector of Bangladesh". BIDS, Vol. XXX11, No. 4,2009.

Thompson, M.A , "Asymmetries in Adjustment in Prime Lending- Deposit Rate Spread". Review of Financial Economics,2006.

Budget Deficit, Money Growth and Inflation: Empirical Evidence from Bangladesh

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Abstract

The dynamic causal relationship among budget deficit, money growth and inflation remains a contentious and lively issue in the literature. Even though the literature on this issue is voluminous, however for Bangladesh it is quite a few. The studies on Bangladesh suffer from methodological deficiency as they did not take into consideration the time series properties of the variables and also suffer from omitted variable bias. This paper overcomes the early studies in terms of data used and techniques applied. This paper also overcomes the methodological deficiency by considering Keynesian and monetarist's contention in analyzing inflation of Bangladesh. The main contribution of the paper is to address the issue of the short run dynamics of the considered variables within a long run relationship. The empirical results show that there is a unidirectional causality runs on budget deficit to money supply, which is supported both by Granger causality as well as by error correction model. The implication of the result is that in Bangladesh budget deficit is monetized by printing money. The study also found that there is a unidirectional causality from budget deficit to money supply and money supply to inflation. The implication of the result is that expansionary monetary policy to combat budget deficit has important effect on the inflationary pressure in Bangladesh, which is in line with the earlier studies in Bangladesh except Taslim (1982). The overall implication of the result is that inflation in Bangladesh is a fiscal driven monetary phenomenon. Therefore to maintain inflation at a tolerable rate budget deficit should be financed by other means than printing money.

Keywords: Budget deficit, inflation, Granger causality test, cointegration, error correction models.

1. Introduction

Budget deficits emerged as an important issue of discussion in the literature over the last decades in the backdrop of the attempts of many countries to achieve rapid economic growth through a sharp increase in government expenditure (exceeding tax collections).

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However, the underdeveloped and developing countries face the scarcity of tangible resources to meet the growing needs of its expenditure. Therefore they had to run in deficit budget, which is financed by borrowing from the domestic banking system or from foreign countries. However, this increased government expenditure crowds out private investment by increasing the interest rate. Therefore, it is a common attempt of the central bank of these countries to adopt accommodating monetary policy, which keeps the interest rate to the market equilibrium rate but erases crowding out. That is central bank monetizing deficit budget by printing money or by increasing money supply causes persistent increase in the domestic price level. Hence inflation emerges as a fiscal driven monetary phenomenon.

Both the theoretical and empirical studies argue that inflation is strictly a monetary phenomenon and that inflation occurs when the rate of growth of the money supply is higher than the growth rate of the economy. This is the conventional monetarist linkage from the creation of base money to inflation when central banks issue money at a rate that exceeds the demand for cash balances at the existing price level and the increased demand in the goods market pushes up the price level as public tries to get rid of its excess cash holdings. It is the contention of these economists that the central bank can eliminate the link between budget deficits and inflation by refusing to monetize the deficit, i.e., by not buying the bonds issued by governments.

Higher deficit policies may, however, lead to higher inflation even in the absence of monetization by central banks. The governments borrowing requirement will increase the net credit demands in the economy, drive up the interest rates and crowd out private investment. The resulting reduction in the growth rate of the economy will lead to a decrease in the amount of goods available for a given level of cash balances and hence the increase in the price level. The other channel through which deficits can lead to higher inflation when central bank do not monetize the debt of the private monetization of deficits. This occurs when the high interest rates induce the financial sector to develop new interest bearing assets that are almost as liquid as money and are risk free. Thus, the government debt not monetized by the central bank is monetized by the private sector and the inflationary effects of higher deficit policies prevail.

Thus, there is a causal relationship among budget deficit, money growth and inflation. However, the debate remains a contentious and empirical issue in the literature. The causal nexus among budget deficit, money growth and inflation has an important implication for conducting monetary policy with the aim of macroeconomic stabilization. However to achieve higher output, full employment and price level stability based on controlling the growth of money supply crucially depends on two prerequisites: first, development of an effective procedure for controlling the rate of growth of money stock and second, close identification of the linkages between the desired growth rate of money and the final objectives (Zaki, 1995).

Like many other developing countries public expenditure as a fraction of national output

show that public sector has an inevitable trend of growth in the long run (Scully, 1989). Bangladesh is one of them whose relative size of public sector has grown over the last decades. The ratio of public expenditure to gross domestic product has almost doubled from the period 1973 to 2008. In Bangladesh budget deficits are highly exogenous, deficit monetization by the central bank was routine and monetary policy was subordinate to fiscal policy. A stabilization and liberalization package was introduced in the early 1990s and gradual steps were taken towards capital account liberalization which resulted in the full convertibility of the Taka. Domestic borrowing by the treasury was initiated at that time which introduced an alternative source of financing for the government.

Apart from the introduction in section One; the paper is organized as follows. Section Two contains a review of the theoretical and empirical literature. The analytical framework consisting of data and the tests of the main statistical properties required for vector error correction mechanism (VECM) are presented in section Three. Section Four analyzes the nature of the model and results. Section Five concludes the paper with policy implications.

2. Review of the Literature

2.1 Theoretical Debate

The dynamic linkages among budget deficit, money growth and inflation have long been discussed in the theoretical literature. The Classical school explained the proportional relationship between money supply and absolute price level without considering the impact of fiscal variables. However, Keynesians rejected the Classical ideas and proposed quantitative theory of government debt. According to Keynesians the change in wages, the price level and the rate of inflation are non-monetary phenomena and are caused by structural factors such as autonomous spending that constitutes investment by business and government spending, is the main source of instability in the economy.

The follower of Classical school, the Monetarists (lead by Milton Friedmen) argued that money plays an active role and leads to the changes in income and prices. According to them to meet the increase of government expenditure over its income (without increase in taxes) government adopts cheap monetary policy i.e. print money (known as seigniorage) which accrues in the hands of taxpayers which leads to the persistent rise in the price level. This argument attribute to the Monetarists contention that inflation is always and everywhere a monetary phenomena (Blanchard et.al.2003). Monetarists' hypothesis is also justified by the quantity theory of money. The recent development of the new Keynesian theory, based on dynamic general macroeconomics models with imperfect competition postulates that individual expectations with respect to current and future fiscal action could affect inflation directly and induce money expansion through a higher price level.

The theoretical debate reveals that the dynamic causal relationship among budget deficit, money growth and inflation can be presented in a tri-variate system to test the direction of causality among them.

2.2 Empirical Studies

The empirical studies on budget deficit, money growth and inflation are plenty and still growing with mixed results. Some of the studies (Darrat, 2000; Saleh and Harvie, 2005; and Narayan et. al. 2006 etc.) did not find any significant relationship among the considered variables, which is consistent with the New Keynesian standard model with Ricardian fiscal regimes. While several other studies (Siegel, 1987; Joines, 1985; Spinelli, 1999; Ozata, 2000; Nachega, 2005 etc.) finds significant positive inflationary effect of budget deficit, which is consistent with the monetarist contention and fiscal theory of price level. King and Plosser (1985) examined the linkages among budget deficit, money growth and inflation for the US and twelve other developed and developing countries. Using postwar data under neoclassical macroeconomic models the study found little evidence that deficit played and important role in postwar inflation exerting pressure on the central bank to print money. For a wide sample of 32 developed and developing countries Karras (1994) finds that deficits are not monetized and therefore are not inflationary. Sargent and Wallace (1981) argues that inflation is linked to how budget deficits are financed and deficits lead to inflation to the extent that they are monetized. Choudhury and Parai (1991) found that budget deficits as well as the growth rate of the money supply have significant impact of inflation in Peru.

2.3 The Bangladesh Perspective

For Bangladesh, there are no previous studies that empirically examine the relationship among budget deficit, money growth and inflation as outlined in this paper. As to the empirical evidence on Bangladesh, there are a few studies (Jones and Sattar, 1988; Chowdhury et al 1995; Ahmed, 1999) linking money, prices, income and interest rate, but no substantial study using appropriate econometric methodology considering the time series properties of data. These studies tried to establish monetarist contention that money had significant role on the other macro and monetary variables without considering the impact of fiscal variables in determining monetary variables.

With the aid of Granger causality test based on monthly data (June 1974 through December 1985), Jones and Sattar (1988) were able to examine the causal link between money – income and money - inflation in Bangladesh. They also found the evidence of unidirectional impact of money on output, with lag of twenty four to thirty six months. The implication of their result is that monetary expansion could have a significant impact on output growth, although as a consequence the economy may experience moderate to high inflation in the short run.

Chowdhury *et. al* (1995) investigated the relationship between money, prices, output and the exchange rate in Bangladesh and concluded that the inflationary process of Bangladesh cannot be explained solely by the 'monetarist' or the 'structuralist' explanation. That is, there is no straightforward cause and effect relationship between money and inflation, while money supply exert a significant unidirectional impact on real output.

The above studies share the common conclusion that causal relationships between money

and income is unidirectional in Bangladesh. However, they did not consider the impact of fiscal variables in determining the monetary variables. Therefore the reliability of the above result may be undermined. These studies did not also examine the time series properties of the data such as stationarity and co-integration and they concluded using arbitrary lag length whether the relationship among variables is short run or long run. This study is an improvement over the existing studies as it examined the stationarity and co-integration approach and applied the error correction approach to understand the short run implication of long run relationship among considered variables. This is therefore very first of this kind of study and tries to overcome the drawbacks of the early studies.

The two major objective of this study are-

i) Gaining an insight into the channels through which budget deficit has been operating in Bangladesh since independence.

ii) The existence and the nature of a stable long run relationship among budget deficits, money growth and inflation and the short run dynamics of the inflationary process as of 1974.

The study is based on the annual data from the period 1974 to 2012. In order to analyze short-run dynamics and long-run relationships among budget deficits, money and inflation, the study makes use of Vector Autoregression (VAR) and Vector Error Correction (VEC) specifications in this study. As unrestricted VARs do not impose co-integration on its variables rather a VEC model needs to be set up if the variables are known to be non-stationary and cointegrated. The study uses both the ADF and PP test to see whether the considered variables are stationary or not. Then the Johansen Juselius test is applied to examine the cointegration of the variables.

3. The Analytical Framework

3.1 Data

This study is based on the annual data for the period 1974 to 2012 taken from the international financial statistics (IFS) data disk 2013. Broad money (M2) is considered as monetary stock. Though some early studies (Jones and Sattar, 1988; Chowdhury *et. al* 1995, Hossian, 2009a) used both narrow money (M1) and broad money (M2) we relied on the later studies (Ibrahim, 1999) which show that the broad money (M_2) is a preferable intermediate target to stabilize the economy and M_2 is found to be cointegrated with other macrovariables and is thus superior as a long run policy variable. Government budget deficit is the difference between its expenditure (both development and non-development) and income. Consumers' price index with base 1973-74 = 100 is considered as the basis for calculating subsequent price levels.

3.2 Testing for Integration (Augmented Dickey Fuller Test)

First, the stationary properties of the time series (lnbd, lnm_2 and lncpi) have been tested to examine the presence of unit root. This is necessary to test whether the considered variables

are *I(1)*. If the variables are integrated of order one i.e *I(1)*, they are stationary. This is accomplished by applying augmented Dickey-Fuller (ADF) test. This test is based on the following regression equation with a constant and a trend of the form:

$$\Delta Y_t = a_1 + a_2 t + bY_{t-1} + \sum_{i=1}^{m} d_i \Delta Y_{t-i} + \varepsilon_t \quad \text{.....(1)}$$

where, $\Delta Y_t = Y_t - Y_{t-1}$ and Y is the variable under consideration, m is the number of lags in the dependent variable, is chosen by Akiake Information criterion and ε_t is the stochastic error term. The null hypothesis of a unit root implies that the coefficient of Y_{t-1} is zero. If the null hypothesis is rejected, then the series is stationary and no differencing in the series is necessary to induce stationary. The result is also further justified by Phillips and Perron (1988) test and KPSS test. The results of these tests are as follows in Table 1.

Table 1: Test for Integration

Variable	ADF		Phillips-Perron	
	Level	First Difference	Level	First Difference
lnbd	-2.008	-5.209*	-0.569	-6.324*
Lnm2	-1.451	-3.538**	-0.714	-4.499*
lncpi	-2.561	-4.435*	-0.812	-5.775*

Note: * and ** denotes the rejection of the null hypothesis at the 1% level and 5% level respectively.

It is evident on Table 1 that all the considered time series are non stationary i.e. *I(0)* at their levels, but becomes stationary at first difference. That is each of the series lnbd, lnm2 and lncpi are integrated of order 1, *I(1)*.

3.3 Testing for Cointegration (Johansen-Juselius test)

If two or more time series become stationary after first differences and they tend to have common stochastic trend implying that they may have long run stable relationship. That is integration of order one means the considered series are cointegrated. In this case all the considered time series lnbd, lnm2 and lncpi are *I(1)* meaning that there can be stable long run relationship among them. The existence of linear independent can be presented empirically by the following cointegrating relationship:

$$\sum_{j=1}^{3} \chi_{ji} Y_{jt} = \nu_{it} \quad i = 1,\ldots\ldots, r \qquad (2)$$

The υ_{it} are *I(0)* series, although the Y_{jt} are *I(1)*. Under *I(0)* of υ_{it} the long run relationship of Y_{jt} (j= 1, ..3) is determined by 3-r common trends. This can be tested empirically either by Engle-Granger (1987) two step cointegration procedures or by Johansen-Juselius

cointegration (1990) technique. This paper applied Johansen-Juselius cointegration technique, which needs to identify the number of cointegrating vectors, namely the trace statistic and the maximum eigenvalue test statistic. The Trace test statistic for the null hypothesis that there are atmost *r* distinct cointegrating vectors is

$$\lambda_{trace} = T \sum_{i=r+1}^{N} \ln(1-\lambda_i) \quad \ldots\ldots(3)$$

where, λ_i's are the N-*r* smallest squared canonical correlations between Y_{t-k} and ΔY_t (where and all the variables in Y_t are assumed *I(1)*), corrected for the effects of the lagged differences.

The maximum eigenvalue statistic for testing the null hypothesis of at most *r* cointegrating vectors against the alternative hypothesis of *r* + 1 cointegrating vectors is given by

$$\lambda_{max} = -T \ln(1-\lambda_{r+1}) \quad \ldots\ldots(4)$$

Table 2 shows the results of the application of Johansen procedure, which shows that equations (3) and (4) have non-standard distributions under the null hypothesis and provides approximate critical values for the statistic, generated by Monte Carlo methods.

Table 2: Johansen's test for multiple cointegrating vectors

Hypothesized cointegrating Ho	Number of relationship H_1	Test Statistic LR	5% Critical Value	1% Critical Value
r = 0	r > 0	39.14*	29.68	35.65
r ≤ 1	r > 1	14.87	15.41	20.04
r ≤ 2	r = 3	3.43	3.76	6.65

Note: * denotes rejection of Ho at 1% level. Likelihood ratio (LR) test indicates 1 cointegration vector for the group of variables.

Table-3 suggests that the considered time series are cointegrated. That is there is at least one cointegrated relationship at 1% level of significance implying that there is a stable long run relationship among budget deficit, money growth and price in Bangladesh. That is implementation of apposite monetary policy in the backdrop of budget deficit have some important long run implications on changes in the price level and so on the inflation in Bangladesh.

3.4 Granger Causality in the ECM-VAR[1]

If two or more time series are cointegrated there is stable long run equilibrium relationship among them. However, in the short run they may be out of equilibrium i.e. in disequilibrium. The error correction mechanism corrects for disequilibrium and ties the

short run behavior to its long run value (Sargan, 1964). Empirically, if two series $\{Y_t: t = 0,1....\}$ and $\{X_t: t = 0,1....\}$ are *I(1)* process, then in general, $Z_t = Y_t - \gamma X_t$ is an *I(1)* process for any number of γ. Nevertheless, it is possible that for some $\gamma \neq 0$, $Z_t = Y_t - \gamma X_t$ is an *I(0)* process, which means it has constant mean, constant variance and autocorrelations that depend only on the time distance between any two variables in the series and is asymptotically uncorrelated. If such a γ exists, we can say that Y_t and X_t are cointegraed and γ is the cointegration parameter (Wooldridge, 2003). The cointegrating relationship $Z_t = Y_t - \gamma X_t$ represents a long run or equilibrium relationship between two variables. Since the considered variables are cointgrated, then according to Granger representation theorem (Engle and Granger, 1987), the relationship among money, income and price can be expressed as the error correction mechanism as follows:

$$\Delta \ln bd = \mu_{11} + \mu_{gdp} v_{t-i} + \sum_{i=1}^{k} \delta_{11,i} \Delta \ln bd_{t-i} + \sum_{i=1}^{k} \delta_{12,i} \Delta \ln m2_{t-i} + \sum_{i=1}^{k} \delta_{13,i} \Delta \ln cpi_{t-i} + u_1 \quad (5)$$

$$\Delta \ln m2 = \mu_{21} + \mu_{m2} v_{t-i} + \sum_{i=1}^{k} \delta_{21,i} \Delta \ln bd_{t-i} + \sum_{i=1}^{k} \delta_{22,i} \Delta \ln m2_{t-i} + \sum_{i=1}^{k} \delta_{23,i} \Delta \ln cpi_{t-i} + u_2 \quad (6)$$

$$\Delta \ln cpi = \mu_{31} + \mu_{cpi} v_{t-i} + \sum_{i=1}^{k} \delta_{31,i} \Delta \ln bd_{t-i} + \sum_{i=1}^{k} \delta_{32,i} \Delta \ln m2_{t-i} + \sum_{i=1}^{k} \delta_{33,i} \Delta \ln cpi_{t-i} + u_3 \quad (7)$$

This equation system represents vector autoregression (VAR) in first differences, which also has error correction terms and allows examining the short run dynamics of the long run relationship among the considered variables. The coefficient of the error correction term must be seen as correcting towards equilibrium subspace i.e. how adjustment is taken place in the short run to maintain stable equilibrium long run relationship among the considered variables. The coefficient of the lagged values of the variables shows whether the independent variables cause the corresponding dependent variable (Ramos, 2001). The result of the causality tests are shown in table 3.

1 This section draws on Hossain et.al. 2009.

Table 3: Temporal causality results based on Granger causality (F statistic)

Dependent	Significant levels of F-statistics			t statistic
Variable	Δ lnbd	Δ lnm2	Δ lncpi	On ECM $_{t-1}$
Δ lnbd	-	0.432	0.167	-0.998
Δlnm2	2.038**	-	0.2915	1.598***
Δ lncpi	2.450**	5.045*	-	-4.9881*

Note: * denotes 1% level of significance, ** denotes 5% level of significance, ***denotes 10% level of significance,

Table 3 reveals that budget deficit is neither caused by money supply nor by price level, but there is a unidirectional causality runs on budget deficit to money supply, which is supported both by Granger causality as well as by error correction model. The implication of the result is that in Bangladesh budget deficit is monetized i.e. by printing money. The table also shows that persistent increase in price level is caused by budget deficit via money supply. That is there is a unidirectional causality from budget deficit to money supply and money supply to inflation. The implication of the result is that expansionary monetary policy has important effect on the inflationary pressure in Bangladesh, which is in line with the earlier studies in Bangladesh except Taslim (1982). The result found from Granger causality test is also supported by the error correction model (ECM). The ECM also shows unidirectional causality from money supply to inflation. However, neither the Granger causality test nor the ECM supports bidirectional causality among the variables as found in different studies.

4.0 Conclusion and Policy Implications

The prime objective of the paper is to examine the dynamic causal linkages among budget deficit, money growth and inflation in Bangladesh over the period of 1974 to 2012 applying cointegration, error-correction models and Granger causality tests taking care of the stochastic properties of the variables. The major contribution of the paper is to address the issue of the short run dynamics of the considered variables within a long run relationship. The paper can be considered as an improvement over the early studies in terms of data used and time series techniques applied. The study found that budget deficit is neither caused by money supply nor by price level, but there is a unidirectional causality runs form budget deficit to money supply, which is supported both by Granger causality as well as by error correction model. The implication of the result is that in Bangladesh budget deficit is monetized i.e. by printing money. The study also found that there is a unidirectional causality from budget deficit to money supply and money supply to inflation. The implication of the result is that expansionary monetary policy has important effect on the inflationary pressure in Bangladesh, which is in line with the earlier studies in Bangladesh except Taslim (1982). The overall implication of the result is that inflation in Bangladesh is a fiscal driven monetary phenomenon. Therefore to maintain inflation at a tolerable rate budget deficit should be financed by other means than printing money.

References

Barnhart, S, and Darrat, A, (1988). "Budget deficits, money growth and causality: Further OECD evidence." *Journal of International Money and Finance* 7 (June):231-242.

De Haan and Zelhorst (1990). "The impact of government deficit on money growth in developing countries", *Journal of International Money and Finance* 9 (December):455-469.

Edwards, S, and Tabellini, G, (1991). "Explaining fiscal policies and inflation in developing countries", *Journal of International Money and Finances*, 10, 16-48

Favero, C, and Spinelli, F, (1999). "Deficit, money growth and inflation in Italy: 1875-1994", *Economic Notes* 28(1), 43-71

Hossain, M.A., Haseen, L., and Jabin, N, (2009). "Dynamics and Causality among Exports, Imports and Income in Bangladesh", *The Bangladesh Development Studies* XXXII(2), 101-113

Johansen, S., and K. Juselius (1990). "Maximum likelihood estimation and inference on cointegration with applications to the demand for money." *Oxford Bulletin of Economics and Statistics* 52, 169–210.

Joines, D. (1985). "Deficit and money growth in the United States: 1872-1983." *Journal of Monetary Economics*, North-Holland: 329-351.

Karras, G. (1994). "Macroeconomic effects of budget deficit: Further international evidence." *Journal of International Money and Finance*, 13 (2):199-210.

King, R., and C. Plosser (1985). "Money , deficit and inflation." In *UnderstandingMonetary Regimes*, edited by K. Brunner and A.H. Meltzar, 147-195. Carnegie Rochester Series on Public Policy. 24

Lütkepohl, H, 2004. Applied Time Series Econometrics, Edited by Helmut Lütkepohl

Nachega, J., (2005). "Fiscal dominance and inflation in the Democratic Republic of the Congo", IMF Working Paper 05/221.

Nelson, E. (2003). "The future of monetary aggregates in monetary policy analysis", *Journal of Monetary Economics* 50: 1029-59.

Phillips, P. and Perron, P. (1988) "Testing for a unit root in time series regression", Biometrika, 75, 335–46.

Protopapadakis, A., and J. Siegel (1987). "Are money growth and inflation related to government deficit? Evidence from ten industrialized economies", *Journal of International Money and Finance*: 31-48.

Sikken, B, and de Haan, J. (1998). "Budget deficit, monetization, and central bank independence in developing countries", *Oxford Economic Papers* 50, 493-511

Liberalization and Economic Growth: A Review of the Bangladesh Economy

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Abstract

This paper focuses on the benefits of openness by trade and financial liberalization on economic growth in Bangladesh. We have analyzed historical developments of major macroeconomic variables and presented charts and statistical tables. We observe that Bangladesh has had impressive growth in exports, remittances and foreign exchange reserve along with strong macroeconomic fundamental in recent years. This paper finds that trade and financial liberalization promote economic growth in Bangladesh; the degree of country's openness in terms of trade share increased to 47 per cent in FY14 from 18 per cent in 1970s. Country's exports enlarged to USD 30 billion (21% of GDP) in FY14 from USD 0.46 billion (around 3% of GDP) in 1970s. FDI inflows also has accelerated along with the increasing trend of remittances inflows. The country experienced surplus current account balance since FY02 except for a deficit recorded in FY11 and FY12. Nevertheless, foreign reserve position rose to the comfortable level at USD 21.56 billion at end June 2014 that is equivalent of 6 months of import payments from USD 1.6 billion at the end of FY00 (equivalent of 2 months of imports). These developments reveal that trade and financial liberalization encourage economic activities that accelerate country's GDP growth.

Key words: Liberalization, trade, openness, foreign exchange.

JEL Code: F14, F43, O40

1. Introduction

The literature of both classical and neoclassical growth model suggest that economic openness plays a significant role in the process of countries' economic growth. Broadly, economic openness potentially enhances the growth prospects of an economy by influencing factors such as production factors accumulation, increasing productivity and innovation. For instance, an open economy which has a comparative disadvantage for the availability of factors gets such factors of production more easily at a low prices from abroad compared to a closed one. Economic openness also leads better allocation of resources; economy becomes specialized in the sector for which it has better factor

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endowments and increase exports. In the process of economic openness technology transfer also makes benefit of the economies of trading countries by increasing in factor productivity and finally enhancing growth (Romer, 1991 and Chuang, 2000). Through the openness single country would not only get the benefit, of course trade partner country gain by proper use their resources by the movement of resources from surplus/abundant country to deficit country.

Notwithstanding that the theoretical considerations and the empirical evidence whether economic openness promotes growth is quite ambiguous. Krueger (1978), Frankel and Romer (1999), and Sachs and Warner, (1995) investigate a strong evidence of an effect of openness on economic growth. On the other hand, a few studies- Srinivasan (2001), Morgan and Wright (1998) conclude that trade liberalization may have negative impact on economic growth. The literature of Awokuse (2007), Bhagwati (1978), Edwards (1998), and World Bank (1991, 1999-2000) support that through the process liberalization of trade and financial sector both developed and developing countries take the advantages by increasing scale of economy and benefit of competitive prices.

Following the comparative advantage theory in trade, Bangladesh embarked on a path of reforms to open up its economy in early 1980s through the process of policy shifting to export promotion from import substitution by introducing the New Industrial Policy (NIP) in 1983 with the aim of improving competitiveness, enhancing economic efficiency, dismantling state enterprises' interventions, increasing participation of the private sector to foster economic growth. The process was accelerated during 1990s by liberalizing its international trade by gradually minimizing the number of items hitherto restricted to trade, by reduction of tariff level and tariff dispersion, by simplification and rationalization of the tariff structure, by deregulation of the import process as well as by providing various export incentives and joining WTO. Since then the measures were undertaken more vigorously, largely focusing foreign exchange regime liberalization, full convertibility of Taka for current account transactions and partially by opening up capital account along with financial sector liberalization to spur both domestic and foreign investment and output growth. That, in turn increased openness and oscillated GDP growth around 6 percent mark in FY04 from the moderate rate of 4.8 percent growth rate of 1990s (Figure 1).

However, wide debate of the impact of trade liberalizations on the economy of Bangladesh are mostly found in various reports of reforms programs such as 'Sectoral adjustment policy reform evaluation (Rahman 1992, Sobhan 1995, Rashid 2000). Ahmed and Sattar (2004) recognizes that trade liberalization and economic reforms contribute to the growth of output, per capita income growth, and poverty reduction. Hossain and Alauddin (2005) examine that increase trade liberalization in 1990s reduce the anti-export bias and during the post liberalization export and real GDP increased steadily. Mohiuddin and Hasan (2005) find that trade liberalization increases the trade-GDP ratio significantly and also inflate export growth. The impact of trade liberalization on the export is highly significant and positive (Nur et al 2007).

Nevertheless, Dowson (2006) has identified that trade liberalization increased the export growth but did not show any effect on the long-run export-income relationship. Raihan (2010) found that in the long run there are possibilities of reduced welfare and increased poverty. However, in the long run, resources are reallocated towards the more efficient and expanding sectors and can generate positive outcomes in terms of welfare gains and poverty reduction. Mujeri and Khandakar (2001) found that trade liberalization is pro-poor. In contrast, Mujeri and Khandakar (2002) argued that though the global process in Bangladesh was pro-poor but the gain is relatively small. Hoque (2008) found that sue to trade liberalization all households' experiences increase consumption.

In this study we analyze comprehensively the progress and impact of economic openness in terms of trade liberalization, financial liberalization and capital account liberalization on country's economic growth. Here, we simply consider the trends of related and associate relationship of major macroeconomic variables- exports; imports, remittance inflows, foreign direct invest (FDI), and real sector output and GDP using charts and tables for the period FY72-FY14. Data has been collected from Bangladesh Bureau of Statistics (BBS), different ministries of Bangladesh Government, Bangladesh Bank (BB), World Bank (WB) and International Monetary Fund (IMF). We observe that openness promotes country's economic growth by increasing *scale of the economic* that accelerates manufacturing output and boosts up exports through forward linking channels.

The paper is structured as – an introduction related to the subject matter that includes a brief review of the literature in Section 1. The next- Section 2 presents a comprehensive overview of the development of different liberalization measures that undertook in different times in Bangladesh. Degree of economic openness and integration with global economy is discussed in Section 3. Section 4 describes development of outcomes of economic openness and while Section 5 briefs on openness and GDP growth. Finally, Section 6 concludes and also discusses policy implications and limitations of analysis of this paper.

2. A brief history of liberalization process in Bangladesh

In Bangladesh, the liberalization processes stated in late 1970s through the denationalization of banks and industries, and the process enhanced in mid-1980s aiming to increase participation of the private sector, promoting export-led growth, improving competitiveness and enhancing economic efficiency. The policies pursued by Bangladesh government have passed mainly in three phases- the first phase (1982-86) was undertaken under the purview of the policy based lending of the World Bank (WB) (WB, 1987); the second phase (1987-91) under the three year IMF Structural Adjustment facility (SAF) in 1986; and the third phase (1991-1993) was under the IMF Enhanced Structural Adjustment Facility (ESAF). The process covers trade and financial liberalization (both internal and external) and also that of capital account liberalization. Trade liberalization is associated mainly with tariff and non-tariff parameters such as tariff rates, tariff and non-tariff

barriers; financial sector liberalization contains liberalization of interest rates, abolishing priority sector lending, improving monetary policy and so on, and while capital account liberalization includes exchange rate liberalization. The initiatives improved macroeconomic condition of Bangladesh. The detail is summarized in the following sections.

2.1 Trade liberalization

Along with the denationalization process, the declaration of the Industrial Investment Schedule in 1976, withdrawal of private investment ceiling in 1978 and introducing New Industrial Policy in 1982 the trade liberalization started in Bangladesh in mid-1970s. The process included the gradual minimizing the number of restricted items for trade, reduction of tariff level and tariff dispersion, simplification and rationalization of the tariff structure, deregulation of import process, export promotion and joining WTO, and regional organization. The export promotion policies cover - Export Performance Licensing, Export Performance Benefit Scheme, Special Bonded Warehouse Scheme, Back to Back LC System, Export Credit Guarantee Scheme, Export Development Fund, allowing retention of exchange earnings, tax-holidays for industries in Export Processing Zones (EPZs) and the like.

Under the trade liberalization process, the import policies were devised to rationalize and to simplify. In order to ensure availability of different kinds of raw materials, machinery and equipment for domestic industries tariff and non-tariff barriers, tariff rates, and quantitative restrictions (QRs) on imports were reduced gradually to promote domestic manufacturing outputs. The maximum tariff rate which was as high as 350 per cent in FY91 reduced to 37.5 per cent in FY00. The rate came down even further to 25 per cent in FY05 that is continuing. Following the policies there had a substantial reduction in the number of banned and restricted items; the total QR that was 315 in FY90 reduced to 63 in FY06 and 18 in FY13. To discourage the imports of finished and luxuries goods, tariff rates on such goods yet very high while the rates on intermediate goods, industrial raw materials, and machinery for domestic industry are relatively low and are even zero for export-oriented farms.

The un-weighted import average tariff rate was 57.22 per cent in FY92 which dropped to 14.44 per cent in FY14. The Most Favored Nation (MFN) tariff rate reduced gradually to facilitate smooth implementation of the import policy of the Government. Broadly, three types of tariff concessions on MFN rates are being provided- i) import under different bilateral/regional trade agreements, ii) imports of capital machinery and spares/parts by registered industrial consumers including export-oriented industries and iii) import of raw materials for a specific use or user (e.g. end use provisions) such as dairy and poultry, pharmaceuticals, leather and textile industries. The development of tariff structure in Bangladesh is given below in Table 1.

Table 1: Tariff Structure of Bangladesh

Indicator	FY91	FY00	FY10	FY14
Number of operative tariff slabs	18	5	5	5
Number of operative tariff (%)	n. a	0,5,15,25, 37.5	0, 3, 5, 12, 25	0, 2, 5, 10, 25
Maximum tariff rate (%)	350	37.5	25	25
Import un-weighted average rate (%)	88.6	22.4	13.7	14.4
Import weighted average rate (%)	42.1	13.8	6.5	n.a
MFN un-weighted average rate (%)	n.a	n.a	15	14.4

Source: National Board of Revenue (NBR). Note: n.a= not available

2.2 Financial sector liberalization

After the independence in 1971, the then government nationalized all financial institutions except a few foreign banks. Bangladesh Bank, the central bank of Bangladesh was established in 1972 and the financial sector was under a regime of rigid government control. However, the reform process in financial sector was initiated in 1982 through denationalization of two commercial banks out of the six and providing a number of licenses for private sector commercial banks. A wide range of reforms in financial sector was undertaken in early 1990s through the implementation of the 'Financial Sector Reform Project (FSRP) in 1990 that ended in 1996. The attempt includes- enhancing the capacity of monetary policy, liberalization of interest rates, abolishing priority sector lending, strengthening central bank supervision, improving the legal system and framework for loan recovery, regulating banks and deepening the capital market (Chowdhury and Raihan, 2000). The reform measures were continued and further extended as greater autonomy given to financial institutions settling deposit and borrowing rates , empowering board and management of financial institutions to take decisions independently, strengthening of criteria/procedure for loan classification and provision, implementation of Basel-II, improvement of capital positions, introducing credit information system for borrowers, rationalization of branch network, computerize and online banking, strengthening payments systems, reducing bank rate, adoption of indirect and market based monetary policy instruments. Now scheduled banks and financial institutions are almost full freedom to determine their deposits and lending rates on the basis of market forces. At present, banks are also enjoying full autonomy to charge different rates on lending for different borrowers depending on the involved risk and maturity factors except agriculture, export, small industry. Banks are also allowed to determine exchange rate freely. Besides, BB is providing prudential guidelines to banks and FIs time to time to ensure financial stability in the country.

It has been empowered the BB and financial institution through the amendment of Bangladesh Bank Order, 1972 (Amended in 2003) and Bank Company Act, 1991 (amended in 2013). Introduction of competitive auction based treasury bills and

Government treasury bonds, national payments systems and establishment of secondary bond market have also strengthened Bangladesh's financial sector.

2.3 Foreign exchange liberalization

The Bangladesh Bank, along with the Ministry of Finance, administers currency policy. Certain exchange transactions are delegated to the authorized commercial banks. The currency of Bangladesh is Bangladesh Taka (Tk), which was created to replace the Pakistan Rupee in January 1972. Before 1983, the Taka was linked to Pound Sterling. The exchange rates for currencies other than Sterling are based on the London market rates for the currencies concerned. Started from January 1983, however, its intervention currency was changed to the U.S. Dollar. With the collapse of the Pound and the dismantling of Sterling Area, Bangladesh maintained its link to the Pound causing the devaluation against the U.S. Dollar. In July 1972, a Secondary Exchange Market (SEM) System, comprised of the Wage Earners' Scheme (WES) and Export Performance Benefit Scheme (XPB), was formed. The SEM Rate was created for foreign currency remittance from Bangladesh nationals abroad.

However, in Bangladesh, the foreign exchange liberalization processes started in 1979 by dropping single currency peg (The British Pound Starling, BPS) exchange management. Country introduced an exchange rate management that comprising weighted of currencies of major 11 trade partner countries according to their relative shares in the trade settlements. Following that a comprehensive trade-volume weighted currency basket was adopted in January 1983 (8 countries' currencies) against US Dollar as of its growing importance in international settlements. In turn, the area of foreign exchange management in Bangladesh moved to market-based floating exchange rate regime in May 2003. Under the regime, banks are permitted to quote foreign exchange freely both with bank and non-bank customers; abolished foreign exchange holding limits for authorized dealer (AD).

To develop a vibrant foreign exchange market it has been prepared Core Risk Guidelines in Foreign Exchange, formed Bangladesh Foreign Exchange Dealers Association (BAFEDA), established foreign currency clearing arrangement with BB, and introduced "Online Monitoring of Foreign Exchange Market". We observed that some countries faced an adverse reaction in adopting floating exchange rate system (India, Brazil, and Thailand) while Bangladesh did not face so. At the early stage of the floating exchange rate regime the market was almost stable with low volatility and minimal depreciation of the Taka against major trading partners' currencies due to adequate preparatory steps was taken by Bangladesh Bank. However, we experienced a sharp depreciation of Bangladeshi Taka (BDT) against USD during July 2010 to January 2012; otherwise the BDT against USD remained stable. The IMF in its country report on Bangladesh (IMF, December 2013) appreciated that the real effective exchange rate (REER) was around its fair value and was

broadly in line with fundamentals. Strong growth of wage-earners remittances from abroad and flow of foreign aid with strong export growth helped keeping competitive of BDT during the last couple of years.

Foreign exchange liberalization process enhanced with the support from IMF under SAF (1988-1990), ESAF (1990-1993) and PRGF/PRSP (1993) during 1990s. The most significant measure of foreign exchange liberalization process was the movement of current account convertibility in 1994. Thereafter, restrictions have been being gradually removed for current account transactions and extensive powers have been given to the ADs to deal with current account transactions. ADs do not require prior approval from BB to conduct current account transactions within the indicative limit as set by BB. Under the process, importers can enjoy short-term suppliers' credits or buyers' credit from abroad for tenure up to one year. Foreign owned/controlled industrial enterprises in Bangladesh are allowed to access interest free loans for working capital other than input procurements from parent companies/shareholders abroad for up to one year without any prior approval. Besides, exporters are allowed to access short-term foreign currency to import of inputs from Export Development Fund (EDF) on sight basis through ADs for up to 180 days.

In Bangladesh, capital account openness process has accelerated by launching 'The Foreign Private Invest Act' in 1980 to increase capital inflows in the form of equity or loans. Through the process, both foreign direct investment (FDI) and foreign portfolio investment (FPI) in Bangladesh are allowed except in a few reserve sectors; foreign investors are free to buy and sell debt/equity securities from/to stock markets in Bangladesh; non-resident Bangladeshis (NRBs) are also allowed to invest and to sell Bangladesh Government Treasury Bonds (BGTBs) at any time. Moreover, foreign investors are allowed to establish enterprises in full ownership and they are permitted to repatriate their dividend/profit and proceeds of liquidation of investment. Foreign owned/foreign controlled companies are also allowed to borrow in short-term or long-term from the local market and also from abroad. However, except some cases (to set up exchange houses abroad by domestic banks, to set up business office abroad for export promotion) outflows of resident-owned capital for investment abroad remain restricted since domestic savings are inadequate for the economy's own investment needs.

Table 2: A Snapshot of economic openness of Bangladesh economy

Policy Criteria	Status
Exchange Rate	Unified
Exchange Rate determination	Floating
Payment convertibility	
Current account	Yes
Capital account	Limited
Import restrictions	
Import licensing	No
QRs on imports	No
State monopolies	No
Tariff structure	
Top Rate, FY14	25
Average Protective Rate FY14	13.9
Tariff slabs (customs duty)	0, 2, 5, 12, 25
Para-tariffs	Supplementary Duties
Existence of high level of NTBs	No
Trade Openness (trade to GDP ratio) in FY14	47 %

Note: NTBs: Non-tariff barriers.

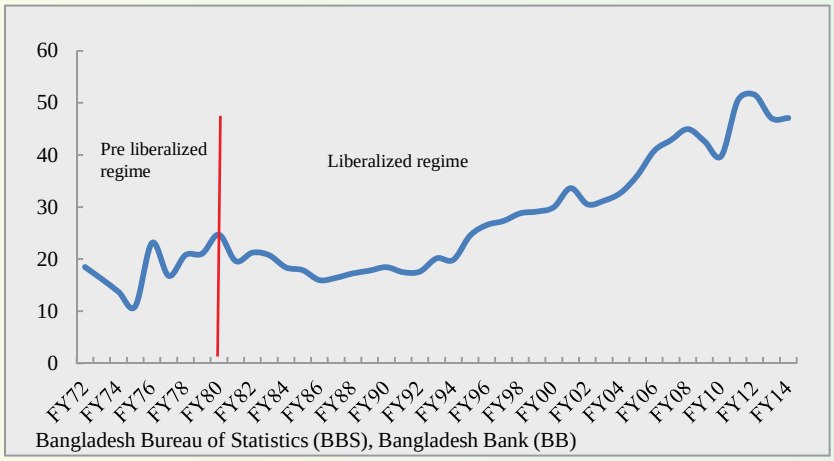
3. Bangladesh economy: Degree of openness

There is no single consensus on how to measure openness of an economy (Das, 2003). It is indeed a tough task and is a common problem across countries. Openness is neither directly observable nor is there a universally accepted measure (either theoretically or empirically). Various contending measures of openness such as trade intensity, tariff and non-tariff barriers, the indices constructed by Dollar (1992) and Sachs and Warner (1995) are used in empirical research. However, we used trade intensity (total trade as percentage of GDP) and tariff rates as openness indicator for Bangladesh economy as we see in many literatures (Harrison, 1994; Adnan. Q. M and Lau. W, 2015).

The undertaken policy measures as discussed above encourage country's participation into global economy in terms of trade of exports and imports. Consequently, the country's openness indicator measured by trade intensity (total exports plus total imports in per cent of nominal GDP) increased sharply since early 1990s and rose to its highest level 52 per cent in FY12 (Chart 1). Onward, the index decreased slightly to 47 per cent in FY14 due mainly to increase GDP as well as imports values. In terms of openness indicator, the figures reveal that the Bangladesh economy was more opened compared to other economies in the SAARC region. In India, total trade to GDP ratio increased to 43.5 per cent in FY13 from 35.4 per cent in FY10. Likewise, the Sri Lanka and Pakistan economies experienced a fall in the ratio in the last couple of years. For instance, the openness

indicator in Sri Lanka declined to 42.3 per cent in FY13 from its highest level of 66.7 per cent in FY04 and in case of Pakistan it came down from 35.5 per cent in FY06 to 27.2 per cent in FY13.

Chart 1: Chart 1: Trade openness in Bangladesh (FY72-FY14)



Bangladesh Bureau of Statistics (BBS), Bangladesh Bank (BB)

4. Development of major external and financial sector indicators in Bangladesh

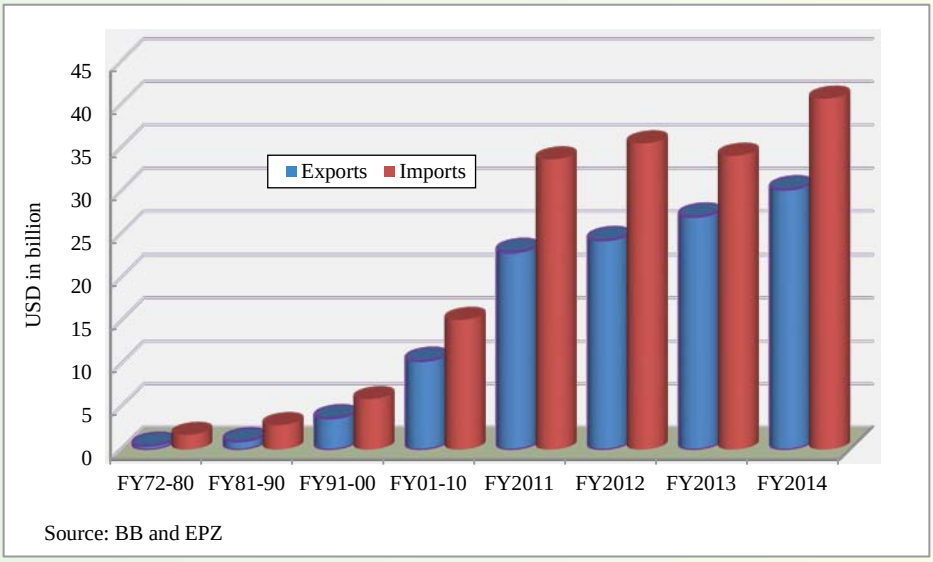
The openness through reduction of trade barriers, cutting down tariff rate, and full convertibility of current account and limited openness of capital account as discussed above has strengthened the macroeconomic fundamental of Bangladesh economy. During last decade, manufacturing output, exports earnings and remittance inflows increased significantly that reduced the trade gap. On the other hand, government expenditure mostly met by revenue earnings where the dependency of foreign debt reduced remarkably that in turn sustainable and managed a comfortable foreign exchange reserve. In landscape view we observe that these indicators contributed to accelerate the country's economic growth. The development of the most encoring indicators— exports, imports, FDI and portfolio investment, and foreign exchange reserve those have shown signs of improvement since late 1990s and the trend continued are discussed in this section based on their trends.

Export earnings: Strong export growth contributed to GDP growth. The government attempts to promote exports that in turn accelerated both the volume and value during the last two decades. During early 1980s, earnings from exports were around a half billion USD (4.0 per cent of GDP) increased almost fifteen times in 2000. The exports receipts recorded at USD 15.57 billion (17.4 per cent of GDP) in FY09 and gradually increased to USD 30.18 billion (20.1 per cent of GDP) in FY14. The export growth recorded around 10 per cent during the last couple of years (Chart 2).

Nevertheless, exports pattern has shifted to manufacturing products from agro-based

primary products due to increased integration with the world economy. In the early 1980s jute, jute products and tea were the main export items. During the 1980s the contribution of primary products in total exports was 30.0 per cent while manufacturing products contributed 70.0 per cent (of which ready-made garments was 22.0 per cent). The scenario changed over the years; the contribution of industrial products increased significantly. In FY14 manufacturing products accounted around for 95.0 per cent of total merchandise exports of which the contribution of ready-made garments (including knitwear) was 81 per cent; primary products accounted for only 5.0 per cent at this time. Steady and robust export growth has contributed to increase domestic output.

Chart 2: Export earnings and Import payments of Bangladesh (USD in Billion)



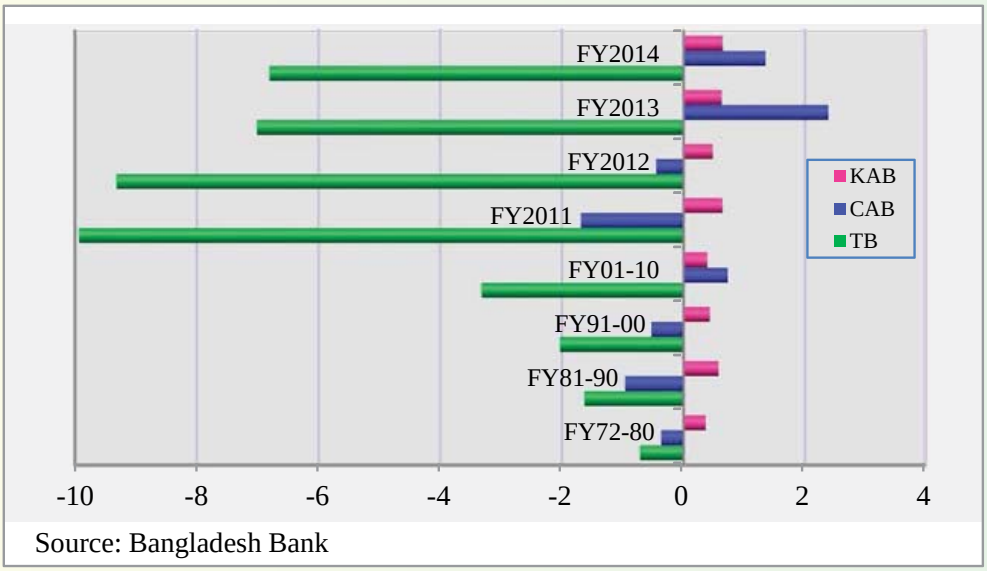
Source: BB and EPZ

Import payments: Import of capital machinery and industrial raw material accelerate country's manufacturing output growth. The supportive measures to gear-up export-led growth, tariff rates and non-tariff barriers on imports of raw-materials and capital machinery were reduced significantly. Thus, over the period both volume and value of imports increased gradually. Import payments (c&f) increased to USD 8.37 billion in FY00 (17.8 per cent of GDP) form USD 1.71 billion (13.5 per cent of GDP) in 1970s. With the continuous increases, import payments stood at USD 40.69 billion in FY14 (27.0 per cent of GDP). However, in total import, imports of raw materials for manufacturing industries increased significantly to 23.0 per cent in FY14 from 14.0 per cent in FY95 due to boost up domestic industrial output.

Current account balance: Moderate current account balance is maintaining by the strong growth of exports and remittance earnings. Current account balance (CAB) of

Bangladesh recorded a deficit accounted around USD 366 million and clustered around 3.0 per cent of GDP in 1970s. The CAB deficit became wider in 1980s, in average accounted USD 869 million (4.4 per cent of GDP). During 1990s the deficit narrowed and improved. Following that the CAB recorded a surplus, amounted USD 157.0 million in FY02 (0.3 per cent of GDP). The trends of surplus continued and reached to USD 3724.0 million in FY10 (3.7 per cent of GDP) except a deficit in FY05. Next two years CAB became deficit and again in FY13 it improved followed by a surplus amounted USD 2525 million that declined USD 1346 million in FY14 (Chart 3).

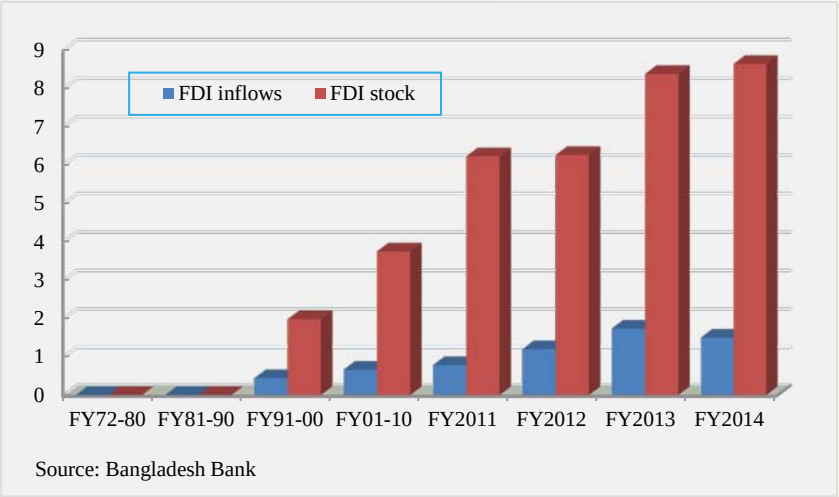
Chart 3: Balance of Payments of Bangladesh (in billion USD)



Source: Bangladesh Bank

Foreign Direct Investment (FDI): Both foreign direct (FDI) and portfolio investments (FPI) showed increasing trend. FDI is a potent weapon for the development of any economy, especially in Emerging Market Economies (EMEs) by bridging the saving investment gap. It contributes to build up physical capital, create employment opportunities, develop productive capacity, enhance skills of local labor through transfer of technology and managerial know-how, and help to amalgamate domestic economy with the global economy. Capital flows not only enable recipient countries to achieve higher growth without sacrificing their current consumption but also provides befits foreign investors by earning higher returns on their capital investment. Over the last decades, almost all developing Asian economies including Bangladesh have progressively adopted more open policies toward FDI flows and this trend is likely to continue in the foreseeable future.

Chart 4: Foreign direct investment in Bangladesh (in billion USD)



Source: Bangladesh Bank

Bangladesh has a number of positive attributes to attract foreign investors from both developed and developing countries. Low wage rates compared to any other Asian countries, stable and single digit inflation, reasonably stable exchange rate, investment friendly custom regulations without any discrimination between foreign and domestic investors, tax holidays, and special investment zones with attractive incentive packages are available for foreign investors. In spite of, Bangladesh could not attract significant amount of FDI inflows though the increasing trends of FDI inflows has continued. In Bangladesh, FDI stock rose to USD 8.62 billion at end FY14 (6.5 per cent of GDP) from USD 3.37 billion (5.6 per cent of GDP) in FY05 (Chart 4). On the other hand, due mainly to the narrow capital market of Bangladesh portfolio investment inflows yet to significant though providing incentive measures continued.

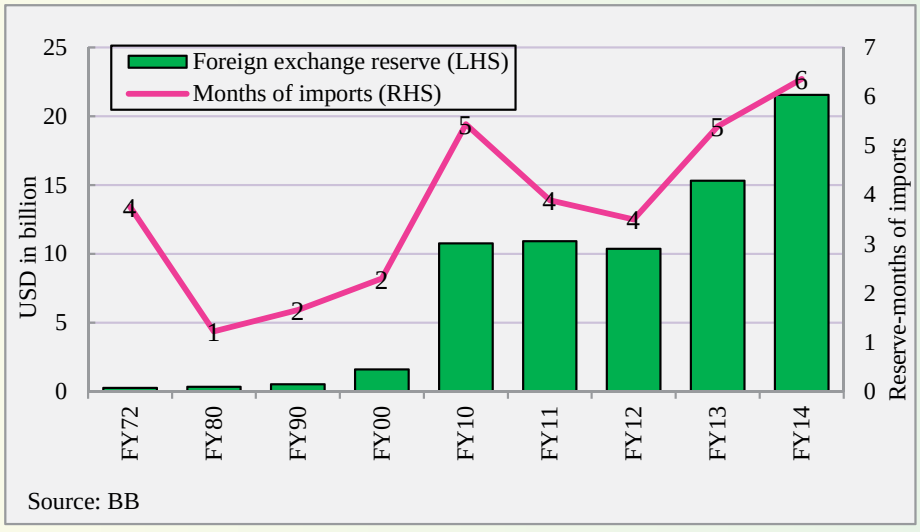
Corporate sector borrowing from abroad: To accelerate private sector, borrowing from abroad by corporate sector has been allowed very recently. Corporations established in Bangladesh are allowed to borrow on medium and long terms from abroad with prior permission of the Board of Investment. However, trends of corporate borrowing from abroad has been increasing gradually because of lower cost of fund and stable exchange rate; this amount is yet to significant (2.1 per cent of GDP at end FY13). External borrowings by the private corporate sector is well managed and under full observation of the administration to eliminate the risk of unnecessary and costly borrowing and piling up of external debt burden.

In addition, Bangladesh Bank is allowing buyers' credit for banks since 2012. Also, banks are permitted to obtain short-term credit line from abroad for discounting export bills. Both initiatives have attracted enterprises. Evidence shows that the stock of short-term borrowing from abroad stood at USD 3.14 billion at the end of February 2014. Such

substantial short-term borrowing (almost 16 per cent of foreign exchange reserve) is a signal to the authorities to take precautions since it may pose a risk to external liquidity as well as the exchange rate.

Foreign Exchange reserve: Healthy foreign exchange reserve buffer foreign exchange market. Due to undertaken different pragmatic measure and a strong export growth and remittance inflows contributed to build up a comfortable foreign exchange reserve in Bangladesh. The foreign exchange reserve stood at USD 21.56 billion at end June 2014 which was equivalent more than six months import payments (Chart 5). However, Bangladesh started it journey with a foreign exchange reserve amounted USD 270 million only in 1971. The reserve was below a half billion till mid 1980s by which covered only two months of imports. Large import payments on food items and fuel, and small exports base was the main reason of small reserve. Moreover the oil price shocks of 1974 and 1979 along with high commodity prices in the international market also created a pressure on foreign exchange reserve. However, the sign of improvements observed in early 90s and crossed billion marks posted USD 1.6 billion in FY92. Except a declining trend during late 90s, the improvements continued along with the accelerated inflows of export earnings and workers' remittances. In FY10, the reserve position crossed USD 10 billion mark that covered about four months imports. Further, reserve accelerated to USD 15.32 billion (equivalent of 5 months of imports) in end FY13 and reached to USD 21.56 billion at end FY14 (equivalent more than 6 months of imports).

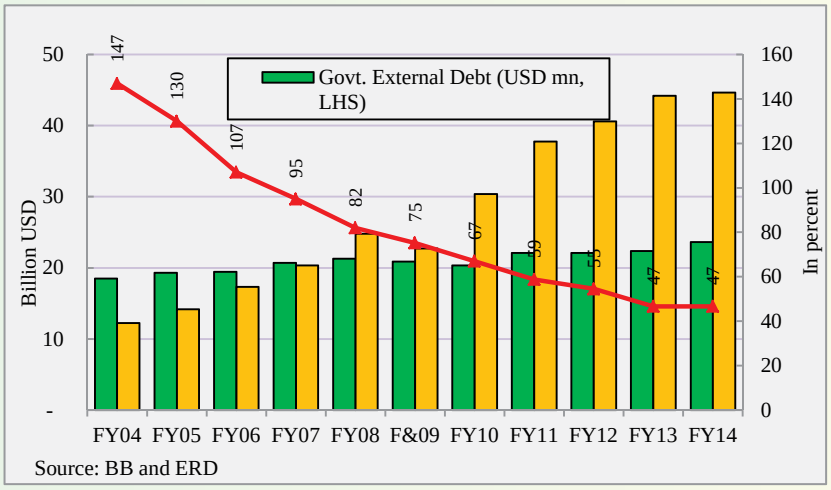
Chart 5: Foreign Exchange Reserve (in billion USD)



Source: BB

Government External borrowing and debt sustainability in Bangladesh: Significant reduction in debt ratios supports debt sustainability in the medium to long-term. Bangladesh government possesses a favorable debt profile split between domestic and external debt to meet the deficit financing of the budget like some other countries. The Bangladesh Government's external debt to GDP averaged 37 per cent during FY80 to FY00, reaching an all-time high of 45 per cent in FY94. The situation has improved gradually since then because of the adoption of different policy measures to improve overall economic activities. The debt to GDP ratio came down to 34 per cent in FY00 and onwards declined gradually and reached to at 16 per cent in FY14. In the same way, government borrowing from domestic sources has remained constant around at 11 per cent of GDP during last decade.

Chart 6: Government external debts and debt sustainability



Source: BB and ERD

External debt sustainability in terms of debt to current account receipts (CAR= export earnings plus workers' remittances plus other foreign exchange receipts) ratio showed a significant improvement during last decade due to accelerated export earnings, remittance inflows and other receipts from abroad that build comfortable reserve. The ratio decreased to 47 per cent in end FY14 from 147 per cent in FY04 (Chart 6). The result of debt sustainability analysis (DSA) based on major macroeconomic developments and borrowing needs updated indicates Bangladesh remain at low risk of debt distress.

5. Findings: Openness and economic growth in Bangladesh

As discussed above, the trend analysis shows that economic openness significantly flourishes foreign exchange inflows through export earnings, remittance and FDI inflows that accelerated private sector. These factors directly promote manufacturing output growth that finally contributes to foster economic growth. Historical episode shows that

growth performance started to improve in the 1990s due to undertake several liberalization steps. In 1990s, the average GDP growth rate increased to 4.8 per cent from 3.3 per cent in 1980s. It turned to moderate at rate above 5 per cent during FY00 to FY05. Since FY04 GDP growth rate accounted above 6.0 per cent except a small declined to 5.9 per cent in FY09 due mainly to the adverse effect of 2008's financial crises and to political unrest in the country. However, the GDP growth performance is largely contributed by robust exports and strong increase in domestic demand led by strong growth performance in manufacturing industry, steady expansion in agriculture, and with major contribution from the service sector (which accounts for around half of the total GDP) that registered 6.1 per cent growth in FY14 (Chart 8).

Chart 7: Scatter plots of economic openness, and manufacturing output and GDP growth

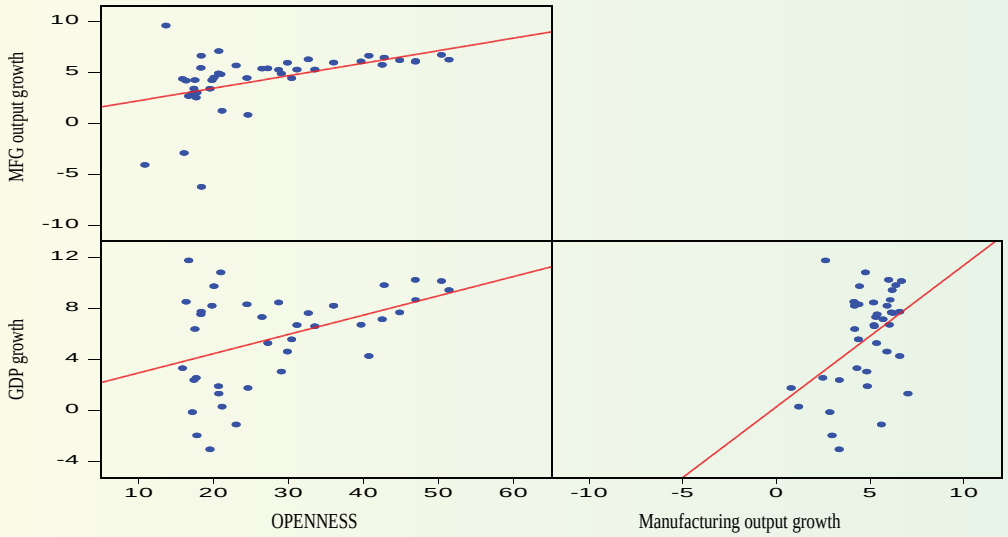
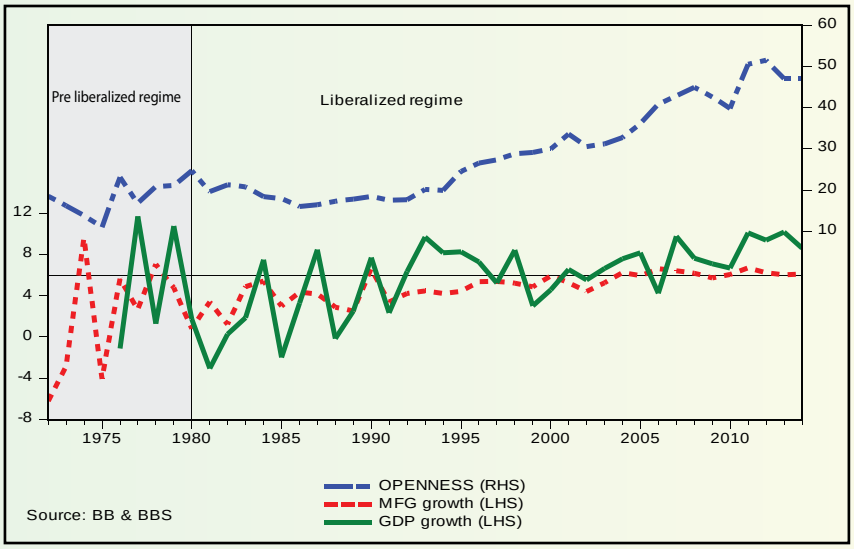


Chart 7 shows scatter plots and regression lines with the growth rates of GDP and manufacturing output, and economic openness index. The relationship between economic openness and manufacturing output growth, manufacturing output growth and GDP growth, and openness and GDP growth are elastic and positive. The relationship between manufacturing output and GDP growth looks highly positive, suggesting a strong interdependence between these variables particularly for a country like Bangladesh. Ready-made garments (RMG) occupy the lion-share in Bangladesh's exports. The RMG sector, in turn, is heavily dependent on the import of raw materials. Moreover, the import of capital good promotes exports of manufactured goods through the process of openness. Thus, the symbiotic relationship between exports and imports is expectedly positive. Thus,

the contemporaneous relation between manufacturing output and GDP growth appears to be strongly positive as shown in Chart 8.

Chart 8: Openness, and Manufacturing output-GDP growth rates of Bangladesh



In correlation analysis of these variables we find significant results. Table 3 presents the correlation coefficients of three variables- GDP growth, manufacturing output growth and economic openness which are positive and significant at 1 per cent level. The correlation coefficient with openness and manufacturing output growth is 61 per cent. The coefficient between GDP and manufacturing output growth is 0.44, and the correlation coefficient between openness and GDP growth is 0.43.

Table 3: Correlation tests:

Variable	Correlation coefficient	t-statics
Corr [openness, manufacturing output growth]	0.61***	4.637
Corr [Manufacturing output growth, GDP growth]	0.44***	2.963
Corr [openness, gdp growth]	0.43***	2.925

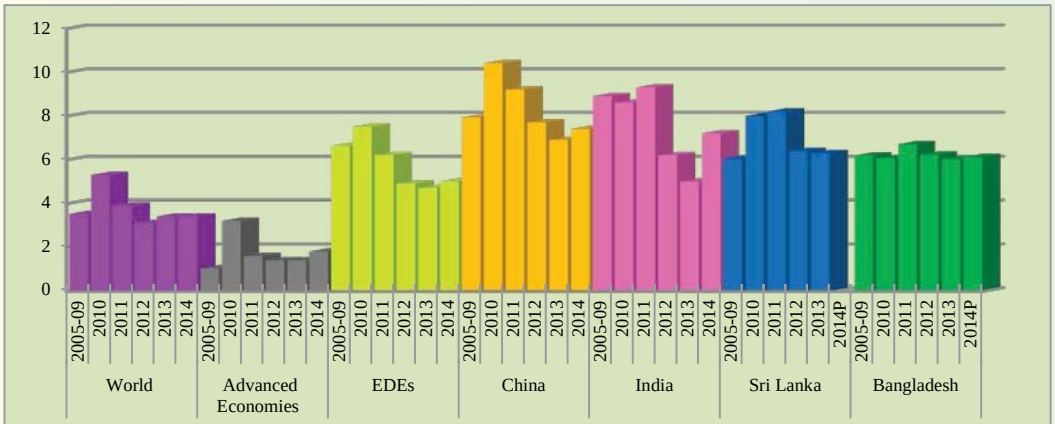
*** indicates the coefficients are significant at 1 per cent level

Openness and economic shocks

In the last three decades, a number of countries have opened their economies in terms of both trade and foreign exchange liberalization. Some of them have benefited from the initiative since they utilized and managed properly the inflows of foreign capital for their economic development that boosted domestic output and accelerated exports. Through this multiplier effect output growth increased. On the other hand, some countries had to face severe financial crises since they could not manage capital flows efficiently; the recent

crisis in India was caused by its failure to manage foreign capital flows adequately. Experiences from both sides have given remarkable lessons for countries like Bangladesh. Exchange rate policies of the crisis-ridden countries were not suitable since their currencies were overvalued so that foreign investors were able to leave local currency denominated assets.

Chart 9: GDP growth rate of selected economies: 2005-2014



World Economic Outlook , April 2015, IMF

However, during last couple of decade the world economy has experienced several crises. Interestingly Bangladesh was not affected remarkably by any of that crisis, including the recent past global financial crisis of 2008 due mainly limited capital account openness with the global economy. The currency turmoil of 1997 in East Asia caused substantial depreciation of exchange rates of East Asian currencies and also of currencies of neighboring India and Pakistan which were major trade partners of Bangladesh. In contrast, the depreciation of the currencies of those trade partner countries of Bangladesh helped the economy rather than hurt it because of cheaper imports because the Taka had appreciated against their currencies as Bangladesh has a huge trade deficit with them. However, financial markets and institutions in Bangladesh have remained free of the toxic assets and contagion afflicting the global financial markets over the past couple of years because of the limited, regulated external exposure of our economy. As a result, Bangladesh economy pass through with a stable growth rate over 6.0 per cent per year during last decade compare to any other developing economy (Chart 9).

6. Concluding Remarks

In this paper, we analyze the trends of major macroeconomic variables of Bangladesh with respect to different liberalization measures regarding economic openness. We find that in line with a number of developing economies and with the objective becoming a middle

income country by 2021, Bangladesh undertook several liberalization steps such as i) deregulation of import process by simplifying and rationalizing trade and tariff structure, cutting down tariff rates; ii) providing incentives for exports; iii) adoption of floating exchange rate management; iv) full current account convertibility of Taka; and iv) limited openness of capital account. These steps widened the country's international trade and increased participation of the domestic product in the world market. Thus, in terms of total trade, country's economic openness extended to 47 per cent in FY14 from 18 per cent in FY90.

The process ensured the availability of essential raw material and machinery for its domestic industry, increased FDI inflows and accelerated integration with the world economy. Through the forces of comparative advantage increased skills and factors productivity, and reduced production costs that led to increase country's economic scale. Resulted that flourished the manufacturing activities in the domestic economy and in turn the contribution of manufacturing sector to the GDP increases.

The trend of economic indicator of Bangladesh also shows that there prevails a stable exchange rate, single digit inflation rate, deepened and stable financial sector, increased remittances and FDI inflows, surplus CAB and comfortable foreign exchange reserve along with other macroeconomic fundamentals. Thus, Bangladesh became one of the Asian *'tiger-case'* recorded more that 6 per cent GDP growth per year during last decade. Indeed, the country is now recognized as a *'trade dependent economy'* and is no longer seen as an *'aid dependent economy'*.

Recognized that, Bangladesh economy faces the challenges such as high cost of land, shortages of power and gas, lack of developed infrastructure (roads, highways, sea ports etc.) and political instability. However, government efforts continue to achieve the goal of making Bangladesh a middle-income group country by 2021 by overcoming the shortcomings discussed above.

Finally, we conclude by offering policy option that Bangladesh economy requires greater liberalization both in trade and capital account, and pragmatic policies to increase both domestic private and foreign investment to foster manufacturing output growth.

References

Ahmed, S and Sattar Z (2004): *Trade Liberalization, Growth and Poverty Reduction: The Case of Bangladesh;* The World Bank, Washington, D.C.

Bangladesh Bank: *Annual Report (issues 1990-2014)*

Bangladesh Bank: *Monthly Economic Trends (issues2000-2014)*

Center for Policy Dialogue: *Evaluation of Bangladesh's Trade Policy*; CPD Research Monograph 3– Aid for Trade: Needs Assessment from Bangladesh Perspective, October 2009, Dhaka, Bangladesh

Chowdhury T.A. and Raihan A., (2003): *Structural Adjustment Participatory Review Initiative,*

Bangladesh Study Theme 2(c): Implications of Financial Sector Reforms; www.saprin.org/bangladesh/research/ban_fiancial.pdf

Dawson P.J. (2006): *The Export-Income relationship and trade liberalization in Bangladesh*; Journal of Policy Modeling 28, 889-896

Dollar, D (1992): *Outward-oriented economics really do grow more rapidly: Evidence from 95 LDCs.* Economic Development and Cultural Change, 40(3), 523-544

Dreher, A (2006): *Does Globalization Affect Growth? Evidence from a new Index of Globalization*, Applied Economics, 38, 10:1091-1110

Edwards, S. (1993): *Openness, trade liberalization and growth in developing countries.* Journal of Economics Literature 31: 1358-1393.

Frankel J. A and Romer D. (1999): *Does trade cause growth?* American Economic Review, 89(3) 379-399

Harrison, N. (1996): *Openness and growth: A time series cross-country analysis for developing countries.* Journal of Development Economics 48, 419-447

Hossain, M.A. and Alauddin, M (2005): *Trade liberalization in Bangladesh: the process and its impact on macro variables particularly export expansion*; The Journal of Developing Areas, 39(1), 127-150

IMF (2014): *IMF World Economic Outlook (WEO), update, January 2014*.

Ministry of Faineance, Government of the People's Republic of Bangladesh: *Bangladesh Economic Review, (Iissues 1990-2014)*

Mohiuddin, K.M.G. and Hasan, M.D.(2005): *Trade liberalization and export performance of Bangladesh*, Institute of Cost and Management Accountants of Bangladesh. The cost and management, May-June2005, 44-46

Mujeri, M.K. and Khandakar, B.H. (2001): *Impact of trade liberalization on income distribution and household welfare: Some general equilibrium results for Bangladesh;* Monitoring Adjustment and poverty in Bangladesh, Report on the framework Project, and Centre on integrated Rural Development for Asia and Pacific, Dhaka.

Raihan S. (2010): *Welfare and Poverty Impacts of Trade Linearization: A Dynamic CGE Micro-simulation Analysis*; International Journal of Microsimulation (2010), 3(1) 123-126

Hoque S. (2008): *The Macroeconomic, industrial, and distribution affects of removing tariffs in Bangladesh*; Centre of Policy Studies, Monas University. General Paper No G-170

Rahman, S. H. (1992): *Structural adjustment and macro-economic performance in Bangladesh in 1980s*. The Bangladesh Development Studies, 20(2,3)

Sobhan, R. (1995): *From theology to empiricism: reappraising Bangladesh experience with economic reforms*. Journal of Political Economy, 12(2).

Sachs, J.D and Warner, A.M. (1995): *Economic convergence and economic policies*. Brookings papers in Economic Activity, 1, 1-95

The Impact of Exchange Rate Variation on Inflation in South Asian Countries

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Abstract

This paper examines the impact of exchange rate variation on inflation in South Asian countries for the sample of the period 1981 to 2012 in a panel data framework rather than time series. The main purpose of this study is to examine whether exchange rate pass-through and/or volatility of exchange rate causes inflation in South Asian countries and what are the policy implications of it for the South Asian countries. This study first estimates inflation model for full sample (60 countries) and then estimates the inflation model for sub-sample of four South Asian countries (Bangladesh, India, Pakistan and Sri Lanka). For estimation of full sample this paper uses fixed effect model and GMM estimation techniques. In case of sub-sample (South Asian countries) this paper uses random effect model and GMM estimation techniques. While using full sample (for 60 countries), it is found that change in exchange rate has significant impact on inflation but exchange rate volatility has no impact on inflation. However, in case of South Asian countries both the exchange rate pass-through and volatility of exchange rate have significant impact on inflation. So, the policy makers of these four South Asian countries should take necessary steps for controlling inflation due to the volatility of exchange rate.

JEL classification: C13, C23, C33, F41.

Key words : *Exchange Rate, Inflation, Volatility.*

Introduction

The current states of South Asian countries have the highest rate of inflation in comparison to other regions of the world. Moreover, both the inflation and exchange rates are also volatile and unstable. There are several reasons which fuel the high inflation in this region. Some of them are; domestic and external demand, government intervention to the market, inappropriate fiscal and monetary policy and adverse supply shock due to the internal political conflict and stock of goods by high profit seeking firms and businesses. South Asia is home to over one-fifth of the world's population, and is the most populous and

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The views expressed in this paper are the authors' own and do not necessarily reflect the views of the Bangladesh Bank. All the errors, omissions, if any, are the responsibilities of the Author.

densely populated geographical region of the world. To a certain extent, South Asia is considered one of the poorest regions of the world. It is well known that the incident of high inflation hampered the purchasing power of the poor and fixed income groups. Moreover, most South Asian countries have deficit in their current account balances. Additionally, increases in oil or food prices in the world market widen the deficit of the current account balance. This widening deficit affects the exchange rate, therefore making it more volatile. The volatile exchange rate may affect inflation, exports, imports and the overall balance of payment situation. As the incidence of inflation is greatly affects the poor and fixed income groups, hence, the volatility of exchange rate and inflation are growing concern in this region. This study investigates whether exchange rate pass-through and/or volatility of exchange rate causes inflation in South Asian countries or not. Also, what are the macroeconomic policy implications of it for the South Asian countries?

There are a vast number of studies on exchange rate movements to inflation, but most of them have investigated an individual country by using a time series data framework. Hossain (2002) investigated the exchange rate response to inflation in Bangladesh from 1972 to 1999. Hyder & Shah (2004) assessed the extent to which the movements in exchange rate affect domestic wholesale and consumer prices in Pakistan by analyzing data from January 1988 to September 2003 using a VAR approach. Sohrabji (2011) examined the relation between exchange rates and prices in India over three periods, 1975-1986, 1992-1998 and 1999-2010, and Duma (2008) investigated pass-through of external shocks (exchange rate, oil price, and import price shocks) to inflation in Sri Lanka. These studies only focused on the individual countries, not on the whole of South Asia. Perceptibly, there is less attention given to the South Asian region in this area of research. That is why, this study attempts to focus on South Asia by using a panel data framework for the time period of 1981 to 2012.

This study attempts to make a contribution to the literature in three ways. First, this study uses a panel data framework for the time period of 1981 to 2012 because time series analysis on an individual country often lacks sufficient observations. Secondly, it calculates exchange rate volatility for each country using *daily* exchange rate data. Thirdly, this study provides empirical evidence that exchange rate volatility has positive impacts on inflation in South Asia.

This study first estimates the inflation model for the full sample (by using 1812 observations for 60 countries) and then estimates the inflation model for a sub-sample of four South Asian countries (Bangladesh, India, Pakistan and Sri Lanka). For the estimation of the full sample, this study uses the fixed effect model and dynamic panel model. In the case of South Asia countries, this study uses the random effect and dynamic panel model. This study found that a change in the exchange rate had a significant impact on inflation but exchange rate volatility had no impact on inflation when using the full sample. On the other hand, in the case of South Asian countries, both the change in exchange rate and

volatility of exchange rate have significant impact on inflation.

Hypotheses for this study are as follows:

(a) The level of exchange rate has a positive and significant effect on inflation.

(b) Exchange rate volatility also has a positive and significant effect on inflation.

(c) Exchange rate regime plays an important role for inflation.

The remainder of this thesis is as follows; Chapter Two presents a literature review, then Chapter Three describes the exchange rate movements and inflation situation in South Asian countries: Some stylized facts and Chapter Four deals with exchange rate history and exchange rate system in South Asian countries. Theory and Empirical Analysis are explained in Chapter Five. Chapter Six contains the empirical results and Chapter Seven presents the conclusion & policy recommendations.

Literature Review

There are two popular views regarding the relation of exchange rate movements and inflation: the structuralist view and the monetarist view. Structuralists argue that the prices of tradable goods rise directly and the prices of non-tradable goods may also rise depending on the labor markets conditions and on institutional arrangements such as wage indexation when there is depreciation. Even if the price of non-tradable goods does not rise in response to wage increases but remains sticky downward, which may raise the general price level or its growth rate (Agenor, 1991), (Aghevli, 1991),(Montiel, 1997), (Krugman P. and Taylor, 1987).

The Monetarist view is very different from that of the structuralists. They view inflation always and everywhere as a monetary phenomenon. An anticipated currency devaluation may increase the excess money supply and thereby inflation (Hossain, 2002).

The exchange rate variation on inflation means that changes in imports prices are translated into domestic prices. There is vast literature on this occurrence (Dornbusch, 1987; Fischer, 1989; Klein, 1990; Freenstra and Kendal, 1994; Amitrano et al., 1997 and Campa and Goldberg, 2002) and the importance given to this issue has increased after the advent of Inflation Targeting. Many authors, such as Goldfajn and Werlang (2000), Calvo and Reinhart (2002), Schmidt-Hebbel and Tapia (2002) and Schmidt-Hebbel and Werner (2002) have shown that the pass-through is higher for emerging than for developed economies.

It is often believed that exchange rate depreciation is closely linked with price inflation. "Traditional monetary theory regards excessive money creation as a common source of instability in both the exchange rate and price level. In the presence of large monetary shocks, price inflation and exchange rate depreciation should, therefore, be closely linked" (Mishkin, 2008).

It is widely recognized in macroeconomic literature that, exchange rate variation on inflation is determined mainly by the level of inflation, the output gap and the credibility of the monetary authority. The output gap affects pass-through by reducing the firm's power to increase prices, as increasing sales firms find it easier to pass-through in cost of final prices (Goldfajn and Werlang , 2000)

Taylor (2000), states that, "the lower pass-through should not be taken as exogenous to the inflationary environment (p.1390)."" Generally, low inflation regime lowers the pass-through by way of weakening the expected future effect of the shocks (via its reaction to price deviations from the target path). Also, low inflation economies could be matter to less variable monetary shocks. The lower variability of monetary shocks would weakening the information content of the exchange rates in expecting monetary shocks and this effect suggests another reason for the pass through to be smaller under a low inflation regime" (Choudhri and Hakura , 2001).

Campa and Goldberg, (2002) found that counties with less exchange rate and inflation variability also have lower rate of pass through of exchange rate into import prices. Mishkin Frederic S.,(2008) argued that, the correlation between consumer price inflation and the rate of nominal exchange rate depreciation can indeed be high in an unstable monetary environment in which nominal shocks fuel both high inflation and exchange rate depreciation.

"If exchange rate pass-through is low it tends to permit a more independent monetary policy. On the one hand, on the time when business cycle are in downward phases, monetary authorities would be less controlled to dampen exchange rate induced inflation and would have more room for countercyclical policies. Moreover, when there are strong demand pressures, a low pass-through helps to contain inflation" (Razafimahefa, 2012).

There have two impacts of goods prices on inflation; first, the shocks of goods prices have an immediate that means direct effect on prices, second, a change in goods prices through exchange rates has an indirect effect on inflation (Furlong and Ingenito, 1996). Country size may be another important factor in ranking pass-through elasticities of countries (Campa and Goldbeg, 2002). It is also explained by Dornbusch (1987), that exchange rate pass-through may be higher if the exporters are large in number relative to the presence of local competitors. One approximation to this point is that pass-through elasticities might be inversely related to a country's real GDP. An alternative approach would be also to consider measures of sector-specific openness for countries.

There are various theoretical models which analyze the links between exchange rate and inflation, and the pass-through reflects the interaction of micro and macro phenomena. On the micro side, producers like to maximize expected profits by fully reflecting the changes in the exchange rate into sales prices. When the structure of the domestic economy is close to a monopoly or to imperfect competition this case will likely to be occurred. Obstfeld and

Rogoff (1995) called this "producer currency pricing". However, in the case of more competitive markets, producers may need to bear a part of the exchange rate changes by reducing mark-ups to keep market share. This behavior is defined by Krugman (1987) as a "pricing to market". In the case where prices are sticky or rigid because of imperfect market mechanisms or administrative constraints, a phenomenon of "local currency pricing" keep it up. Also, if consumers like to maximize their utility by "flying from quality", that is consuming locally produced goods instead of imported ones, the degree of the overall pass-through might be reduced. On the macro side, most recent studies utilize the framework of new open macroeconomics or new Keynesian models to establish the effects of exchange rate changes on inflation (Choi and Cook, 2008).

Asia Economic Monitor (2011) found that an increase in food and energy prices has had an upward pressure on inflation in emerging market economies like Southeast Asian countries.

De Gregorio (2012) found the same findings like Asia Monitor. De Gregorio (2012) recommends that in emerging market economics that are dependent on food and energy imports, an increase in goods prices predictably has an upward pressure on inflation rates.

Theory and Empirical Analysis:

Theoretical Model

This study motivated the empirical investigation from the theoretical model in Goldberg & Knetter (1997). They analyze the related strands of literature on goods price and exchange rates by "the law of one price". The summery of the theoretical model are as follows.

Suppose P is denoted the home currency price in country A, P* the home currency price in country B, and e is the exchange rate of A's currency per unit of B's. If the law of one currency holds for some good i, then:

$P_i = EP^*_i$ …… (1)

If the law of one currency price held for all countries for some product we would characterize this as an integrated world market. If the law of one price held for all products between two countries then the absolute purchasing power parity theory (PPP) of exchange rates would hold between two countries:

P= E …….…… (2)

Where P and P* are price levels in countries A and B.

Because the assumptions of costless transportation and resale are likely to hold in practice and the absolute version of the law of one price and PPP are often modified. Let costs of transportation or resale preclude price equalization, but the frictions give rise to a stable price differential across two markets. In this case, we have

$P_i = \alpha E$ and ……. (3)

$P = \alpha EP^*$ …..……..... (4)

Here α is the real exchange rate. If α remains constant overtime, then common currency prices for a particular product changes in the same way overtime in two countries, and the relative LOP (Law of one price) and PPP holds.

Rogoff (1996) provides an excellent review of theory and evidence on PPP. We concentrate here on studies of the LOP.

Consider the following generic regression model which will be used to discuss the research on prices and exchanges rates:

$Pt = \alpha + \delta Xt + \gamma Et + \Psi Zt + \varepsilon_t$ …….(5)

Here all variables are in logs and p is price for a particular product, X is the primary control variable, E is the exchange rate, Z denotes other control variables in the model, ε is the error term, and t denotes the time period.

Empirical Model

It is generally said that inflation is always a monetary phenomenon. In fact, traditional monetarists support the strict view that non-monetary factors are extraneous in determining inflation. According to the traditional monetarists view, inflation results from monetary growth (M_2), and demand and supply have no roles in clarifying inflation. Kuttner (1990) expressed the opposite view of the pure monetarist. He noted that in the long run, although some measures of money (possibly M_2) may be the main determinant of inflation, not only money matters in determining inflation over all horizons.

Moreover, a number of empirical studies show that the sources of inflation are quite diverse in developing countries and include the following:

First, exchange rate variation potentially affects inflation. A previous study found that (for example, Goldfajn and Valdes, 1999) for future depreciations real exchange rate depreciation is an important element.

Second, output gap also affects inflation. A deviation of an economy's actual output from its potential level as a result of an excess demand in an overheated economy will lead to a inflation.

Third, inflationary environment also determins the willingness of firms to increase price in the presence of increasing cost.

Fourth, the degree of openness of a country to the rest of the world should also affect the inflation. Blejer and Leiderman (1981) claimed that in an open economy, there is a strong

presumption that domestic relative price volatility will be influenced by foreign relative price volatility.

Fifth, fiscal balances also affect the inflation. This approach links inflation to public sector deficits. Lim and Papi (1997) found that public sector deficits play a central role in the inflationary process.

Sixth, exchange rate regime also plays an important role for determining inflation.

According to the above discussion, the following model is built to explain inflation due to exchange rate variation:

Model:

$$\mathbf{lncpi_{it} = \beta_0 + \beta_1 lnex_{it} + \beta_2 exvol_{it} + \beta_3 lngdpgap_{it} + \beta_4 M_{2it} + \beta_5 lncpi_{i,t-1} + \beta_6 tradeopen_{it} + \beta_7 fiscalbal_{it} + \beta_8 exregime_{it} + \alpha_{it} + u_{it}}$$

The model basically follows the literature on exchange rate variation on inflation at the macroeconomic level. The idea is straightforward: today's inflation is determined by the past inflation, output gap, exchange rate depreciation, exchange rate volatility, broad money growth, fiscal deficit and trade openness.

Methodology

This study estimates the impact of exchange rate variation on inflation in a dynamic panel data model from the period 1981 to 2012 for four South Asian countries.

To minimize the measurement error we calculate GDP gap by using the Hodrick-Prescott filter method (the deviation of actual GDP from an estimated trend).

First, we estimate the model by using fixed effect model and random effect model for calculating the Hausman test. The result of the Hausman test determines whether the model is fixed effect model or random effect model.

Second, we estimate a dynamic panel model using Generalized Moments of Method (GMM). Since a dynamic model includes lags of the dependent variable as explanatory variables standard econometric techniques such as OLS, IV, etc. do not yield efficient estimates of the parameters (Sevestre, 2002). In this case, the GMM method delivers a solution to the problems of simultaneity bias, reverse causality and omitted variable bias (Kpodar, 2007), as well as yielding estimates of unobserved country-specific effects and dummy coefficients for which the usual methods ("within" or "difference") would be unsuitable given the dynamic nature of the regression (see Calderon et al. 2006).

As lagged inflation is dependent variable of inflation here, lagged inflation may be correlated with error term. That is why here we use system GMM estimation.

Empirical Results

Table 1 shows the estimation results of the fixed effect model for all countries. Based on the random effect and fixed effect model, the Hausman test was carried out, and the results of the Hausman test show that our model is fixed effect model.

Two types of specification are shown in the Table- 1. First, estimation results depict that lnex (exchange rate pass-through), m_2 (broad money) and lncpi1 (previous inflation) and tradopen (trade openness) are significant at the 1% level of significance and all of them are correctly signed except tradopen variable. Though the exchange rate regime can play an important role for pass-through inflation but here exchange rate regime variable (exregime) is not significant. Moreover, exvol (exchange rate volatility) also has no impact on inflation. The second estimation in table-1 shows the conditioned regression. Here, also, all variables except exvol are statistically significant.

In addition , the conditioned variable lnexregime (lnex*exregime) is highly significant that meaning that the exchange rate regime has significant impact on inflation which is relevant to other empirical studies such as Dosse Toulaboe & Rory Terry (2013). These authors also found that the rate of inflation is unambiguously positively linked to real exchange rate depreciation regardless of exchange rate arrangements.

Table-1: Estimation Result of FE Model for All Countries

Dependent	(1)	(2)
variable lncpi	FE	FE
lnex	0.100***	0.027**
	(0.010)	(0.013)
exvol	-0.000	-0.000
	(0.000)	(0.000)
lngdpgap	0.017**	0.019**
	(0.008)	(0.008)
tradopen	0.149***	0.151***
	(0.039)	(0.038)
exregime	-0.003	-0.014***
	(0.004)	(0.004)
m2	0.001***	0.001***
	(0.000)	(0.000)

lncpi1	0.847***	0.809***
	(0.009)	(0.011)
lnexregime		0.009***
		(0.001)
Constant	0.018	0.200
	(0.187)	(0.185)
Observations	1,812	1,812
R-squared	0.970	0.971
Number of id	60	60

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2 shows the GMM estimation. From this table we see that lagged inflation is highly significant which tells that the lack of monetary stability and credibility of the exchange rate system provides an environment which highlighted uncertainty and generates a high coefficient for the lagged price changed. GMM estimation in Table 2 shows almost the same specification like as the fixed effect model in Table 1.

Table-2: Estimation Result of GMM for all countries

Dependent	(1)	(2)
variable lncpi	GMM	GMM
L.lncpi	0.906***	0.884***
	(0.008)	(0.010)
lnex	0.022***	-0.041**
	(0.006)	(0.017)
exvol	-0.000	-0.000
	(0.000)	(0.000)
lngdpgap	0.016***	0.023***
	(0.002)	(0.002)
tradopen	0.044**	0.049***

	(0.019)	(0.019)
m2	0.001***	0.001***
	(0.000)	(0.000)
exregime	0.001	-0.007*
	(0.003)	(0.003)
lnexregime		0.006***
		(0.002)
Observations	1,812	1,812
Number of id	60	60

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Other variables, for instance lnex, lngdpgap and m_2 are highly significant on the first estimation in Table 2. The second estimation also shows the same specification.

The lnex variable is still significant at 5% level and interaction term also significant at 1% level. Exregime, m_2 and lncpi1 are significant at 1% level but exregime variable is not correctly signed.

Table 3 shows the random effect model estimation for the South Asian case. On the basis of random effect and fixed effect model, the Hausman test was carried out. The results of the Hausman test show that our model is random effect model. In the South Asian case, the exchange rate pass-through (lnex), lngdpgap, trade openness and fiscal balance variables are not significant but exvol (exchange rate volatility) and exchange rate regime (exregime) are significant. Also lagged inflation is highly significant with a large coefficient.

In Table 3, columns two and three show the estimation result of the interaction term exvol-regime (exvol*regime) and lnexregime (lnex*regime). All estimation results show that exvol is more significant than exchange rate change in South Asian countries.

Table -3: Estimation Result of RE Model for South Asian Countries

Dependent variable lncpi	(1) RE	(2) RE	(3) RE
lnex	0.008	0.008	-0.049*
	(0.006)	(0.006)	(0.029)
exvol	0.009***	-0.005	0.008***
	(0.003)	(0.016)	(0.003)
lngdpgap	0.000	0.000	0.001
	(0.002)	(0.002)	(0.002)
tradeopen1	-0.035	-0.041	-0.041
	(0.036)	(0.037)	(0.036)
fiscalbal	0.001	0.001	-0.000
	(0.002)	(0.002)	(0.002)
exregime	0.011***	0.005	-0.061*
	(0.004)	(0.009)	(0.037)
m2	0.001	0.001	0.000
	(0.000)	(0.000)	(0.000)
lncpi1	0.982***	0.982***	0.981***
	(0.003)	(0.004)	(0.003)
exvolregime		0.005	
		(0.005)	
lnexregime			0.019**
		(0.010)	
Constant	0.078*	0.097**	0.283**
	(0.041)	(0.047)	(0.112)
Observations	124	124	124
Number of id	4	4	4

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4 shows the estimation result of GMM for South Asian Countries. In this case, exchange rate regime (exregime), previous inflation (lncpi1), lngdp gap and exchange rate volatility (exvol) are highly significant. Broad money growth (m2) and fiscal balance are significant at 5% level. Trade openness is not significant at all though it is correctly signed.

Columns two and three of Table 4 also show the estimation result with interaction. According to the result, only exvol, exregime and lag inflation (lncpi1) are statistically significant at 1% level. From the estimation result, it is clear that, the pass through is very low. The exregime variable is significant which means exchange rate regime can play important role for inflation. The lncpi1 variable is highly significant that means, previous inflation and or inflation environment also play an important role for inflation.

Table-4: Estimation Result of GMM for South Asian Countries

Dependent variable lncpi	(1) GMM	(2) GMM	(3) GMM
L.lncpi	0.983***	0.983***	0.983***
	(0.002)	(0.002)	(0.002)
lnex	0.008**	0.008**	0.019**
	(0.004)	(0.004)	(0.008)
exvol	0.009***	0.011	0.009***
	(0.002)	(0.009)	(0.002)
lngdpgap	0.003***	0.003***	0.002
	(0.001)	(0.001)	(0.001)
tradeopen1	-0.019	-0.019	-0.026
	(0.022)	(0.022)	(0.023)
m2	0.001**	0.001**	0.001**
	(0.000)	(0.000)	(0.000)
fiscalbal	0.002**	0.002*	0.002*
	(0.001)	(0.001)	(0.001)
exregime	0.011***	0.012**	0.025***
	(0.002)	(0.005)	(0.009)
exvolregime		-0.001	
			(0.003)
lnexregime			-0.004
			(0.002)
Observations	124	124	124
Number of id	4	4	4

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

From Table 4 it is clear that both the change in exchange rate and exchange rate volatility are responsible for inflation in South Asian countries. However, it is somehow different from the all country sample. In case of all country sample exchange rate volatility has no role for inflation, only change in exchange rate has some role for inflation.

Now it is clear from the estimation results that nominal exchange rate depreciation increase domestic price level both in the all country sample and the South Asian case. All estimation results show that the coefficient of exchange rate variable is low which indicates the lower passthrough. This may be because of exchange rate depreciation or fluctuation of the exchange rate not much more related to inflation and may inflation environment or adverse supply shock is responsible for inflation.

Moreover, the nominal exchange rate depreciation increase the domestic price of internationally–traded goods and put upward pressure on the general domestic price level. Additionally, the impact of nominal currency depreciation on domestic inflation depends on the degree of openness of the country and the response of foreign suppliers and local distributors to the devaluation.

Futhermore, exchange rate volatility also has a significant effect on inflation in the South Asian country case. There are several possible reasons here. Firstly, excessive volatility of exchange rate creates uncertainty in the exports and imports of a country. When uncertainty enters the producers/exporter's objective function, the profit of risk-averse firms declines because of uncertainty. When products are invoiced in the home currency, the exporter's will face a quantity risk because the quantity demanded will be uncertain and in this case firm contracting supply. Due to bottlenecks of supply will causes price hike in this region. Secondly, firms will also face uncertainty regarding cost of production. When exchange rates are volatile firm are unwilling to import factor inputs which reduces the supply and increases the prices. Thirdly, financial institutions may be weak and not well-developed in this region (except India), so that financial institutions cannot take proper steps for the fluctuation of exchange rate which ultimately affects the inflation

Lagged inflation rate is highly significant which points to an important role for expectations in deriving inflation. This could reflect either low credibility of the monetary policy and/or uncertainty concerning economic development and geopolitical changes in this region. Inflation expectations remain high in this region, because higher prices will cause workers to demand higher wages, causing a wage price spiral. Therefore, expectation of inflation is important; if people expect high inflation, it tends to be self-serving.

Exchange rate regime plays a significant role in inflation in the South Asian countries. Except India, the other three South Asian countries (Bangladesh, Pakistan and Sri Lanka) introduced flexible exchange rate system from the last decade. Intuitively, under a flexible exchange rate regime, countries experience volatile terms of trade will also experiencing volatile exchange rates; whereas under flexible exchange rate regimes, the consequence of a sharp increase in commodity price (such as the oil price) will be reflected in higher inflation. As a result, inflation will be more volatile, and hence, the underlying exchange rate will become more volatile as well.

Conclusion & Policy Recommendation

This study investigated the impact of exchange rate variation on inflation in four South Asian countries and found that both the change in exchange rate and volatility of exchange rate causes inflation in these countries. It was also found that not only exchange rate changes or volatility but other reasons such as exchange rate regime, inflation environment (lag inflation) are liable to cause higher inflation in this region.

The monetary authority should take the necessary steps with an aim to minimize wide ranging fluctuations in the exchange rate that may encourage speculative activities and weaken the stability of the economy. To achieve this goal, exchange rate policy should be such that if tries to maintain the right balance between necessary flexibility to guarantees the competitiveness and desirable stability to increase confidence in domestic currency and basic requirements should be fulfilled that provides support to the currency value over time.

References

Agenor, P. (1991). Output, Devaluation and the Real Exchange Rate in Developing Countries. Review of World Economics, 18-41.

Aghevli, B. S. (1991). Exchange Rate Policy in Developing Countries: Some Analytical Issues. Occasional Paper no. 78, IMF.

Amitrano et al (1997). Why has inflation remained so low after the large exchange rate. *Journal of Common Market Studies. 35.*

Annual Report on Exchange Rate Arrangements and Exchange Rate Restrictions. IMF. (2012).

Arellano M. A and Bover, O., (1995). Another Look at the Instrumental-Variable: Estimation of Error-Components Models. Journal of Econometrics, 68, 29-51.

Arminio Fraga, Ilan Goldfajn, André Minella (2003). Inflation targeting in emerging market economies. NBER Macroeconomics Annual.vol -18. MIT Press., pp. 365-400.

Asia Economic Monitor. (2011) "Managing Commodity Price Volatility and Inflation in Emerging East Asia", Emerging East Asia-A Regional Economic Update, July 2011.

Atish R. Ghosh,Anne-Marie Gulde,Jonathan D.Ostry & Holger C. Wolf. (1997). *DOES THE NOMINAL EXCHANGE RATE REGIME MATTER?* Cambridge, MA 02138: NBER WORKING PAPER SERIES 5874.

Augustine C. Arize, J. M. (2004). Variations in exchange rates and inflation in 82 countries : an empirical investigation. *North American journal of Economics and finance*, 227-247.

Bjornland, H. C. (2000). *Identifying Domestic and Imported Core Inflation.* IMF working paper, wp/00/4.

Blejer and Leiderman (1981). A monetary Approach to the Crawling-Peg System:Theory and Evidence. *Journal of Political Economy, Vol.89*, 132-51.

Callen, T. and Chang ,Dongkoo (1999). *Modelling and Forcasting Inflation in India.* IMF working paper, WP/99/119.

Campa, J. Goldberg, Linda S. (2002). Exchange rate pass-through into imports prices: A Macro or Micro phenomenon. *NBER Working Paper no 8934*.

Campa, J. Manuel and Goldberg, Linda S. (May 2002). Exchange Rate Pass-Through into Import Prices. *NBER Working Paper No 8934*.

Choi, W. G. (2008). "New Keynesian Exchange Rate Pass-Through". *IMF Working Paper No 08/213*.

Choudhri, Ehsan U. and Hakura, Dalia (2001). *Exchange Rate Pass-Through to Domestic Prices: Does It Inflationary Environment Matter?* Washington D.C.: IMF Working Paper, WP/01/194.

De Gregorio, José. (2012) "Commodity Prices, Monetary Policy and Inflation", Prepared for the Conference on Policy Responses to Commodity Price Movements, organized by the IMF and the Central Bank of Turkey, April 2012 .

Dornbousch, Rudiger. (March, 1987). Exchange rates and Prices. *American Economic Review, American Economic Association, vol. 77* (*1*) , 93－106.

Duma, Nombulelo (2008). *Pass-Through of External Shocks to Inflation in Sri Lanka.* Washington D.C.: IMF Working Paper, WP/08/78.

Feenstra, Robert C. & Kendall, Jon D. (August, 1997). Pass－Through of Exchange Rates and purchasing Power parity. *Journal of International Economics , Elsevier, vol. 43* (*1－2*) , 237－261.

Fisher, Eric. (February, 1989). A Model of Exchange rate pass－through. *Journal of International economics, Elsevier, vol. 26* (*1－2*) , 119－137.

Furlong, Fred, and Robert Ingenito. (1996) "Commodity Prices and Inflation", FRBSF Economic Review, Number 2, pp. 27-47.

Goldberg, K. and Michael M. Knetter (1997). Goods prices and exchange rates: what have we learned? *Journal of Economic Literature*. vol-35, Issue-3, pp 1243-1272

Goldfajn, I. and Rodrigo O. Valdés (1999). The Aftermaths of Appreciations. *Quarterly Journal of Economics, vol.114, No. 1*.

Goldfajn, I. and Sergio R.C. Werlang (2000). The pass-through from depreciation to inflation: a. *Central Bank of Brazil. Working Paper no 05.*

Goyal, Ashima (January,2011). *Inflationary Pressures in South Asia , MPDD Working Papers No WP/11/14.* ESCAP.

Hooper, Peter, and Kohlhagen, Steohen. (November 1978). The Effects of Exchange Rate Uncertainty on the Price and Volume of International trade. *Journal of International Economics*, 483-511.

Hossain, A. (2002). *Exchange Rate Responses to Inflation in Bangladesh.* International Monetary Fund (IMF),IMF Working Paper No. 02/166.

Hyder, Zulfiqar and Shah, Sardar (2004). *Exchange Rate Pass-Through to Domestic Prices in Pakistan.* State Bank of Pakistan Working Paper No 5.

Jose Manuel Campa, L. S. (NBER Working Paper, WP No.11632). *Exchange Rate Pass-Through into Import Prices in the Euro Area.* National Bureau of Economic Research.

Junior, Reginaldo Pinto Nogueira, *Inflation Targeting and Role of Exchange Rate Pass-through.* Department of economics, University of Kent.

Klein, Michael W. . (December, 1990). Macroeconomic aspects of exchange rate pass－through. *Journal of International Money and Finance, Elsevier, vol. 94*), 376－387.

Kpodar, K. (2007). *Manuel d'initiation à Stata.* CERDI, CNRS. Janvier 2005, pp 5-77.

Krugman P. and Taylor, L. (1987). Contractionary Effects of Devaluation. *Journal of International Economics,Vol. 8, Issue 3*, 445-456.

Krugman, P. 1. (1987). *Pricing to Market when the Exchange Rate Changes.* Sven Arndtand J.

David Richardson, eds., Real Financial Linkages Among Open Economies, MIT Press:.

Kuttner, K. N. (1990). Inflation and Growth Rate of Money. *Economic Perspectives, Federal Reserve Bank of Chicago, Issue January*, 2-11.

Lim and Papi (1997). *An Ecometric Analysis of the Determinates of Inflation in Turkey.* Washington D.C.: IMF Working Paper, WP/97/130.

Minella, A. e. (2003). Inflation targeting in Brazil: constructing credibility under exchange. *Journal of International Money and Finance*, pp.1015-1040.

Mishkin, F. S. (2008). *Exchange rate pass-through and monetary policy.* NBER Working Paper, Working Paper No. 13889.

Montiel, P. (1997). *Exchange Rate Policy and Macroeconomic Management in ASEAN Countries.* Washington, D.C. IMF.

Obadan, M. I. (2007). Exchange Rate Policy Design : Choosing the right exchange Response in a changing Environment. *Economic and Financial Review,Vol-45, No-4*, 129-141.

Obstfeld, M. a. (1995). Exchange Rate Dynamics Redux. *Journal of Political Economy, Vol. 103*, 624–660.

Parsley David ,C.and Cai, Ziyong (1995). Exchange Rate Uncertainty and Traded Goods Prices. *International Economic Journal , Vol-9 , No-2*, 27-35.

R.Blundell, a. S. (1998). Initial Conditions and Moment Restrictions in Dynamic. *Journal of Econometrics 87(1)*, 115-143.

Razafimahefa Ivohasina F. (June 2012). Exchange Rate Pass-Through in Sub-Saharan African Economies and its Determinants. *IMF Working Paper No WP/12/141*.

Reinhart, C. (2002). Fear of Floating. *The Quarterly Journal of Economics*, pp. 375-408.

Rogoff, K. (1996). The purchasing Power Parity Puzzle? *Econ Lit. June 1996, 34(2)*, 647-668.

Sevestre P. (2002). *EconomÈtrie des donnÈes de panel.* Dunod: Paris.

Sohrabji, Niloufer (2011). Impact of Exchange Rates on Consumer Prices in India: Comparing Different Trade Liberalization and Monetary Policy Regimes. *Middle Eastern Finance and Economics, ISSN: 1450-2889, Issue 12 (2011).*

Toulaboe Dosse &Terry Rory (2013). Exchange Rate Regime : Does it Matter for Inflation ? *Journal of Applied Business and Economics vol.14(1)*, 56-71.

World Currency Year Book. (Different Issue).

Appendix-A

$lncpi_{it}$ = log of CPI (Consumer Price Index)
$lnex_{it}$ = log of nominal exchange rate
$exvol_{it}$ = exchange rate volatility
$lngdpgap_{it}$ = log of GDP Gap
M_{2it} = Broad Money Growth
$lncpi_{i,t-1}$ = lag value of logcpi
$tradeopen_{it}$ = Trade openness
$Fiscalbal_{it}$ = Fiscal Balance
$Exregime_{it}$ = Exchange rate Regime

PERFORMANCE ANALYSIS OF SELECTED LOCAL PRIVATE COMMERCIAL BANKS IN BANGLADESH

Kazi Naim Morshed[1]

Abstract

Performance of private commercial banks (PCBs) in Bangladesh depends on some internal and external factors such as bank size, risk management, overhead cost, capital, ownership of the bank, interest rate spread, bank expenses, inflation, central bank interest rate, GDP, taxation, variables that represents market characteristics (e.g. market concentration, industry size and ownership status etc) on the performance of the bank. This paper uses a multi-criteria, performance based index to rank 27 PCBs operating in Bangladesh. Total profit (TP), return on asset (ROA), return on equity (ROE), and labor productivity (LP) for the year ended 2012 have been considered as pillars of the performance based index. After construction of performance index the hypothesis that there is a relationship between bank performance and bank size is tested through regression analysis. It is found that there is significant positive correlation between bank size and their performance.

Keywords: *performance ROA, ROE, Labor productivity, bank size, performance factors, loan, performance index*

1. Introduction

Banking system of Bangladesh comprises of four nationalized commercial banks (NCBs), twenty eight conventional private commercial banks (PCB), seven islami shariah based PCBs, nine foreign banks and four specialized banks (Bangladesh Bank (BB)). NCBs are dominating the banking sector in terms of deposit size, asset and number of branches. Therefore, their performance is expected to be better than that of PCBs. But NCBs are losing their market share to private commercial banks to a large scale and to foreign bank to a lesser extent because of directed lending, weak standard of corporate governance and under-developed risk management system etc. (Fitch Report, 2009). Islam et al. (2014) identified lack of corporate governance and presence of undue political pressure in loan disbursement as the major problems of NCBs. Jahangir & Haq (2005) stated that inadequate infrastructure, obsolete technology, conventional managerial approaches contributed to the depressing performance of NCBs.

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Banking system of Bangladesh faces the challenge of reducing interest rate spread & non-performing loan, improving asset quality, increasing profitability, maintaining adequate provisioning for loan losses and strengthening capitalization. It was observed that interest rate spread (IRS) in Bangladesh is considerably higher than many other countries. Higher IRS indicates lack of risk management skill and practice, high level of non-performing loan etc. However, as competition increases average interest rate spread of banking sector is going to achieve regulatory target of 5% in recent years. From liberation to till late 1990s, a huge amount of non-performing loan mounted up due to political pressure, inefficiency, directed credit and corruption. Until 2011, classified loans were in declining trend. Then it shows an increasing trend. The new stricter loan classification and provisioning regulations of Bangladesh Bank in 2012 are considered as major cause of rising tendency of classified loans. As a result, bank performance in terms of ROA and ROE is deteriorated. In addition, the rising capital adequacy ratio of the banking sector of Bangladesh declines slightly (Financial stability report of BB, 2012).

As stated earlier, NCBs are losing share to PCBs to larger extent which indicates that PCBs are performing better in terms of different performance indicators. Obviously not all PCBs are attaining the same profit. It depends on some internal and external factors. Bank size is one of them. It may be argued that generally large banks show better performance. Hence, it will be interesting to see whether there exist correlation between bank size and profitability. This paper mainly tries to find out the degree to which there is a correlation between performance and bank size (total assets) in the private commercial banking industry of Bangladesh. The paper uses a multi-criteria, performance based index to rank the private commercial banks operating in Bangladesh. Total profit (TP), return on asset (ROA), return on equity (ROE), and labor productivity (LP) are considered as pillars of the performance based index.

Literature review is discussed in the next section. The methodology is explained in section three. Before conclusion the empirical results have been discussed.

2. Literature Review

Like other business, profitability is the key factor for the existence of banking business. Profitability performance indicates the success of bank management. Labor productivity, ROA, ROE are some widely accepted indicators to measure bank performance. Among them, ROA and ROE are the important indicators of bank's profitability. Both indicators show net profit earned per dollar of asset and equity respectively. They indicate the efficiency of bank management in terms of profit generation. Literature (e.g. Venkartraman and Ramanujam, 1986) distinguishes bank performances into three types: financial, business and organizational. Financial performance includes ROA, ROE and earning per share (EPS). Chang et al. (2010) considers ROE as the most important and a representative indicator among all traditional indicators. Bank performance can be expressed as a function of internal and external determinants. Internal determinants of bank profitability

applied in literature are bank size, risk management, capital, ownership of the bank, interest rate spread, bank expenses etc. External determinants of bank profitability employed in study are inflation, central bank interest rate, GDP, taxation, variable that represents market characteristics (e.g. market concentration, industry size and ownership status etc).

Study shows that in the 70s and 80s, labor efficiency of American banks was lower than that of banks in Japan and other industrialist countries (Choi and Tschoegl 1984, Hunter and Timme 1990). Before that, i.e. in 60s, the result was opposite (Kaufman, 1970). American banks required less labor to produce same financial service than that of Japanese banks. This exposes that they had a better economies of scale earlier. Experience reveals that the impetus for merger and acquisition among banks was the cost saving which, in essence, helped them to attain economies of scale. Demirguc-Kunt and Maksimovic (1998), Akhavein et al. (1997), Smirlock (1985) found a positive and significant relationship between bank size and profitability. Big banks usually disburse big amount of loans and advances and invests in non-traditional business, thus, earn higher revenue. Hunter and Timme (1986) point out that there is a positive relationship for size of bank assets and non-traditional banks profit.

While some study shows a positive relationship between bank size and profit, other shows that profitability actually depends on bank size to a certain limit. For example, economies of scale do exist in the industry where bank asset size is less than USD100 million. Beyond that, efficiency decreases (Berger and Humphrey, 1993). Allen and Rai (1996), Hameetemam et al. (2000) find better economies of scale for smaller banks. In other words, there is a negative relationship between bank size and bank profit.

2.1 Literature on internal factors except bank size that affect bank performance

Apart from bank size, other internal determinants of bank performance are risk management, interest rate margin, capital, bank expenses etc.

It is expected that bank’s profit may increase with the increase of loan to total asset ratio. This ratio can be treated as a proxy variable for risk which has a positive effect on the profitability (Abreu and Mendes, 2002). That means, bank loans (can be explained as risk) have a positive impact on its profit (Naceur, 2003). Some study find negative and significant relationship between the level of risk and profitability (Bourke, 1989, Molyneux and Thornton, 1992). Staikouras & Wood (2003) also find negative impact of higher loan ratio to negative profit. A big chunk of unpaid loan may be the cause of these results. Thus, poor risk management causes banks to have lower profit in their basket.

Besides, if interest rate margin becomes narrow and loan loss provision happens to be higher, the profitability of the bank will go down. Therefore, interest rate spread and the quality of loan matters more significantly than loan size (Vong, 2005). Therefore, those banks are better performed banks, which have higher net interest margin and stable growth

rate (Hashlem et al. 1983). These banks also do better by controlling their non-interest expenses. Samuelson (1945) also expressed the same view that banks gain more by raising the interest rate. On the contrary, it may reduce bank profit and increase the risk (Silverberg, 1973)

Chang et al. (2011) explores the impact of interest spread on the profitability of bank in Taiwan with different capital size. In order to find the relationship, they have divided banks into four capital groups. They found positive relationship between bank profit and loan-deposit interest spread for the 3rd capital group. For the other three groups, the result is negative. Their study also reveals that ROE is positively correlated with net commission income, net interest income and net non-operating income.

Capital is another internal determinant of bank performance which is considered as the best single indicator of measuring bank's strength and performance. Olalekan and Adeyinka (2013) found positive relationship between capital and bank performance. A well capitalized bank may not require external funding, which reduces its cost of funding and results in higher profitability. In extreme cases of severe credit default, capital works as cushion if a bank fails to meets its losses from loan loss provision. Therefore, capital can be treated as the symbol of bank's soundness and safety.

Apart from the factors mentioned above, bank expenses also play important role in determining bank's profitability. An efficient bank management always tries to keep its level of expenditure at an optimum level by adopting advance technologies in communication, information and financial technologies. As a result, cost-to-income ratio reduces and profitability of the bank increases. Almazari (2014) found negative relationship between cost-to-income ratio and profitability.

2.2 Literature on external factors that affect bank performance

External determinants of bank profitability as mentioned earlier are inflation, central bank interest rate, GDP growth, ownership status etc.

Inflation generally reduces the real income of the bank. If expected inflation can be anticipated correctly, bank gets opportunity to adjust the interest rate accordingly, in order to boost the revenue quicker than cost, with a positive impact on profitability. Thus, exact anticipation of expected inflation has a positive impact on profitability of the bank. While Hefferman and Fu (2008) found positive relationship between inflation rate and profitability, Hong and Razak (2015), however, found that inflation rate has no significant impact on profitability.

GDP growth also positively affects bank performance. During economic boom, banks earn more by disbursing more loans and advances and thus acquire higher economic profit. Hong and Razak (2015) found that nominal GDP affects profitability positively.

If central bank eases monetary policy by lowering interest rate, bank can disburse more

loans and advances and results in higher profitability. Adrian and Shin (2009) found that low short term interest rate improves banks’ profitability.

Ownership of the bank, another external determinant, can influence the performance of the bank. It is expected that private-owned banks do better than state-owned banks. In his study, Kiruri (2013) claimed that government ownership had significant negative effects on bank profitability or efficiency, while domestic and foreign ownership had significant positive effects on bank profitability.

3. Data and Methodology

3.1 Sample and data

The data set in this study includes 27 private commercial banks namely Islami Bank Limited, Eastern Bank Limited, Dutch Bangla Bank Limited, Prime Bank Limited, Shajalal Islami Bank Limited, EXIM Bank Limited, Al-Arafah Islami Bank Limited, Standard Bank Limited, Social Islami Bank Limited (SIBL), Southeast Bank Limited, One Bank Limited, National Credit and Commerce Bank Limited (NCC), AB Bank Limited, Pubali Bank Limited, Bank Asia Limited, Uttara Bank Lmited, Mercantile Bank Limited, Jamuna Bank Limited, Dhaka Bank Limited, National Bank Limited, First Security Bank Limited, Premier Bank Limited, The City Bank Limited, Mutual Trust Bank Limited (MTB), Brac Bank Limited and Trust Bank Limited.

Data set includes profit after provision and before tax or total profit (TP), profit after tax (PAT), size of the bank or total assets (TA), total equity (TE) and total revenue (TR). TR is the sum of total interest income and total non-interest income. In case of shariah-based bank, this is the sum of investment income and non-investment income. Data for TP, PAT, TA, TE and TR have been gathered from the financial statement for the year 2012 as on 31st December. Total number of employees of stated banks for the same year has been taken from the annual report of that year.

3.2 Methodology

Based on the information, return on asset (ROA), return on equity (ROE) and labor productivity (LP) are calculated. ROA is calculated by dividing PAT by TA, ROE is found by dividing PAT by TE, LP is found by slashing TR by the total number of employees. As data for the particular date have been considered for the analysis, instead of return on average asset (ROAA) and return on average equity (ROAE); ROA and ROE have been considered.

Towards construction of performance index, relative value of TP, ROA, ROE and LP are found. Relative value is obtained by dividing the value of a variable of an individual bank by the sum of values of that variable of all banks. The sum of all relative values of a particular bank is multiplied by 100 to calculate the score of that bank. Score of each bank

is divided by the highest score to find the performance index. The index value ranges from zero to one where zero indicates the lowest performance and one indicates the highest. After construction of performance index the hypothesis that there is a correlation between bank performance and bank size was tested through regression analysis.

Empirical Results

Table 1: Performance Index of Selected Private Commercial Bank, 2012 (BDT Million)

Rank	Index	Bank Name	Size	Total Profit	ROA	ROE	LP
1	0.9999	Islami Bank	482,649.49	12,237.18	0.0116	0.1416	4.15
2	0.8919	Eastern Bank	147,148.00	4,369.61	0.0163	0.1387	13.26
3	0.7971	Dutch Bangla	155,918.60	4,817.10	0.0148	0.2132	3.46
4	0.7880	Prime Bank Limited	236,833.00	5,335.09	0.0114	0.1298	10.20
5	0.7874	Shajalal Bank	133,900.01	3,584.26	0.0130	0.1807	9.45
6	0.7311	EXIM Bank	166,997.92	3,613.89	0.0125	0.1259	10.66
7	0.7177	Al-Arafah Islami	149,320.36	3,944.09	0.0130	0.1385	7.91
8	0.6742	Standard Bank	93,895.97	2,472.89	0.0133	0.1521	7.91
9	0.6713	SIBL	114,829.11	2,772.15	0.0128	0.1443	8.06

10	—— 0.6318	Southeast Bank	189,921.58	3,603.83	0.0087	0.0833	11.51
11	0.6308	One Bank Bank	84,592.20	2,125.24	0.0132	0.1532	6.48
12	0.6107	NCCBL	126,068.22	2,814.91	0.0115	0.1194	7.54
13	0.6106	AB Bank limited	175,517.13	3,496.26	0.0083	0.0902	10.49
14	0.6099	Pubali Bank	192,947.92	6,135.80	0.0091	0.0992	3.10
15	0.5368	Bank Asia Limited	141,235.37	2,681.01	0.0060	0.0648	12.16
16	0.5208	Uttara Bank	123,790.62	2,549.23	0.0100	0.1329	3.84
17	0.4906	Mercantile Bank	154,147.70	2,377.44	0.0089	0.1247	4.13
18	0.4876	Jamuna Bank	109,678.50	2,200.81	0.0095	0.1251	3.86
19	0.4871	Dhaka Bank	133,616.09	1,594.08	0.0059	0.0806	11.14
20	0.4697	National Bank	204,613.86	3,258.20	0.0070	0.0640	6.65
21	0.4665	First security	129,937.80	1,503.21	0.0059	0.1335	6.74

22	0.3553	Premier Bank	81,805.03	920.18	0.0074	0.0844	4.48
23	0.3506	The City Bank	130,313.87	1,815.90	0.0061	0.0440	5.94
24	0.3366	MTBL	93,162.05	818.82	0.0035	0.0678	7.98
25	0.2980	Brac Bank Limited	180,396.13	2,176.11	0.0039	0.0610	3.03
26	0.2626	Trust Bank Bank	96,339.25	951.95	0.0019	0.0267	7.96
27	0.1934	IFIC Bank Limited	114,772.95	1,462.00	0.0004	0.0060	5.86

After regression analyses following results have been found:

Table 2 : Model Summary

R	R Square	Adjusted R Square
0.531	*0.282*	*0.254*

Table 3 : Coefficients

		t	P value
Constant		*4.776*	*0.000*
Bank Size	0.531	*3.135*	*0.0043*
Confidence interval = 95%			

Table 4 : Correlations

		Index
Bank Size	Pearson Correlation	*0.531*

First, there is a positive relationship between performance score or index and bank size. Second, The value of R-square of 0.28 means only 28% percent of the variation in the performance score is explained by the bank size. This might seem rather a low value, but in cross sectional data, typically one obtains low R-square value possibly because of the diversity of the units in the sample. Third, coefficient of correlation of 0.531 shows that the two variables are, performance score and bank size are positively correlated. Fourth, at the 95% confidence level, the t-statistic is 3.135 which falls in the critical region implies that we can reject the null hypothesis that the true population value of regression co-efficient is zero. Fifth, The exact probability (i.e. *p* value) of obtaining a t value of 3.135 or greater is 0.0043. Therefore, if we reject the null hypothesis, the probability of committing Type I error is about 43 in 10,000, a very small probability indeed. Thus, it can be concluded that the true population co-efficient of bank size is different from zero.

4. Conclusion

The performance of PCBs in Bangladesh depends on some internal and external factors. Bank size is one of them. The paper uses a multi-criteria, performance based index to rank the private commercial banks operating in Bangladesh. Total profit (TP), return on asset (ROA), return on equity (ROE), and labor productivity (LP) are considered as pillars of the performance based index. After construction of performance index the hypothesis that there is a correlation between bank performance and bank size is tested through regression analysis. It is found that there is significant positive correlation between bank size and their performance. The limitation of the study is its small sample size (27). Further research is suggested to study the role of other internal and external factors such as - labor productivity, risk management, overhead cost, capital, ownership of the bank, interest rate spread, bank expenses, inflation, central bank interest rate, GDP, taxation, variables that represents market characteristics (e.g. market concentration, industry size and ownership status etc) on the performance of the bank.

References

Adrian, T. and Shin, H.S. (2009), Money, Liquidity, and Monetary Policy, American Economic Review. 99 (2) pp. 600-605.

Almazari, A. A. (2014), Impact of Internal Factors on Bank Profitability: Comparative Study between Saudi Arabia and Jordan, Journal of Applied Finance & Banking, vol. 4, no. 1, 2014, 125-140.

Akhavein, J.D., Berger, A.N., Humphrey, D.B., (1997), The effects of mergers on efficiency and prices: evidence from a bank profit function, Finance and Economic Discussion Series 9, Board of Governors of the Federal Reserve System

Athanasoglou, P., Brissimis, S N., and Delis, M D. (2005), Bank-specific, industry- specific and macroeconomic determinants of bank profitability, MPRA Paper No. 153

Berger, Allan N and David Humprey. (1993), The Dominance of Inefficiencies over Scale and Product Mix in Banking, Journal of Banking and Finance.

Bourke, P. (1989), Concentration and other determinants of bank profitability in Europe, North America, and Australia, Journal of Banking and Finance, 13(1), 65-79

Chang, Mathew C., Nieh, Chien-Chung. and Peng, Ya- Hui (2011), Are bigger banks more profitable than smaller banks, Journal of Applied Finance & Banking, vol.1, no. 3, 59-71.

Choi, Sang-Rim and Adrian Tschoegl, (1984), A Bank Employment in the Worlds Largest Banks: An Update, Journal of Money, Credit and Banking, 16, August, pp. 359-362.

Demirguc-Kunt, A. and H. Huizinga (1999), Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence, World Bank Economic Review, Vol. 13, 379-408.

D. Hameeteman and B. Scholtens. (2000), Size, growth, and variance among the world's largest non-merged banks, International Journal of the Economics of Business, 7, 313 - 323.

J.A. Haslem, J.P. Bedingfield and A.J. Stagliano (1983), Bank performance measures and relative profitability, Bankers Magazine, 40, (1983), 73 - 76.

Hefferman, S., & Fu, M.(2008), The Determinants of Bank Performance in China, SSRN working paper series, 25 August 2008

Hong, S. C. and Razzak, S. H.A.(2015): The impact of nominal GDP And inflation on the financial performance of islamic banks in Malaysia, Journal of Islamic Economics, Banking and Finance, Vol. 11 No. 1.

Hunter, William and Stephen Timme (1990), Employment in the Worlds Largest Banks, Economic Review, Federal Reserve Bank of Atlanta, January/February, pp. 2-11.

Islam, Md. Ariful. Siddiqui, Mahmudul Hasan., Hossain, Kh. Fahim., Karim, Lutful (2014) Performance evaluation of the banking sector in Bangladesh: A comparative analysis, Business and Economic Research, vol.4, no.1, 70-701.

Jahangir, Nadim and Haq, Mahmudul (2005), Effects of Managerial Leadership Power Bases on Employees' Job Commitment in the Nationalized Commercial Banks of Bangladesh, Bank Parikrama, BIBM, vol. XXX, no. 1, p. 22.

Kaufman, George G. (1970), Bank Employment: A Cross-Section Analysis of the Worlds Largest Banks: A Comment, Journal of Money, Credit, and Banking, 2, February, pp. 101 111.

Kiruri, R. M. (2013). The effects of ownership structure on bank profitability in Kenya, European Journal of Management Sciences and Economics, 1(2), 116-127

L. Allen and A. Rai. (1996), Operational efficiency in banking: an international comparison, Journal of Banking and Finance. 20, 655 - 672.

Molyneux, P., and Thornton, J. (1992) Determinants of European bank profitability : A Note, Journal of Banking and Finance 16(6), 1173-1178.

N. Venkatraman and V. Ramanujam. (1986), Measurement of business performance in strategy research: a comparison of approaches, Academy of Management Review. 801 - 814.

Naceur, S. B. (2003), The Determinants of the Tunisian Banking Industry Profitability: Panel Evidence,Universite Libre de Tunis Working Papers.

Olalekan, A. and Adeyinka, S (2013): Capital adequacy and bank’s profitability: an empirical evidence from Nigeria, American International Journal of Contemporary Research Vol. 3 No. 10

Samuelson, P.A. (1945), The effect of interest rate increases on the banking system, American Economic Review, 35, 16 - 27.

Silverberg. S.C. (1973), Deposit costs and bank portfolio policy, Journal of Finance, 28, 881 - 895.

Smirlock, M., (1985), Evidence on the (non) relationship between concentration and profitability in banking, Journal of Money, Credit, and Banking 17, 69-83.

Vong, L.K. (2005), Loans and Profitability of Banks in Macao, AMCM Quarterly Bulletin, Issue No. 15, April, 91-107.

A Review of the SME Financing Framework of Bangladesh : Issues and Challenges

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Abstract

Considering the importance of SMEs in economic growth and development of Bangladesh, substantial attention has been devoted to the materialization of SMEs' easy and cost effective access to finance. Still it is not adequate to support the full potential of SMEs in Bangladesh. Apart from this, it is understood that to reap maximum benefits from SME financing, it should be accompanied by parallel efforts to improve the investment climate and to develop other related SME support services. This paper attempts to analyze the current financing framework of SMEs in Bangladesh for developing SMEs with a view to providing an understanding on the issue in the context of the country. The study is supported with data on current SME financing status of Bangladesh and constraints therein. The findings of this paper are certain issues and options explaining mechanisms and supports related to the SME financing and development with an emphasis on replicating the best practices of the SME-enriched countries which could be a better mode of learning for Bangladesh. Subsequently, practical suggestions and recommendations are presented which can promote greater access to finance and efficient use of funds and thereby ensure the optimum finance for the sustainability of SMEs in Bangladesh.

Keywords: Access to finance; SMES; Development framework.

JEL Classification: L70, M20, G28

1. Introduction

1.1 Background of the Study

Small and Medium Enterprises (SMEs) are the dominant form of business organization in all countries, generally representing more than 95% of the business population. OECD

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2. According to the National Industrial Policy-2010 and Bangladesh Bank, medium enterprises in the manufacturing sector are enterprises with either the value (replacement cost) of fixed assets, excluding land and building, ranging between Tk 100 million and Tk 300 million or the number of workers ranging between 100 and 250. In the services sector, a 'medium enterprise' is an enterprise with either the value (replacement cost) of fixed assets, excluding land and building, ranging between Tk 10 million and Tk 150 million or the number of workers ranging between 50 and 100.In the manufacturing sector, a small enterprise is an enterprise with either the value (replacement cost) of fixed assets, excluding land and building, ranging between Tk 5 million and Tk 100 million or the number of workers ranging between 25 and 99. In the services sector, a 'small enterprise ' is an enterprise with either the value (replacement cost) of fixed assets, excluding land and building, ranging between Tk 0.5 million and Tk 10 million or the number of workers ranging between 10 and 25. If a firm is in the 'small' category as per a certain criterion and in the 'medium' category based on another criterion, the firm will be deemed a 'medium' category one.

recognized that SMEs constitute an important dynamic element in all economies as they drive innovation and play a key role in driving sustainable economic growth, employment creation and poverty reduction, particularly in developing countries. It also contributes to the social, cultural and environmental capital of nations. SMEs are regarded by many governments and international developmental organizations as engines of innovation, economic growth, employment generation and poverty reduction. The role of Small and Medium Enterprises (SMEs) is indispensable for overall economic development of a developing country like Bangladesh. Since this sector is labor-intensive with short gestation period, it is capable of increasing national income as well as rapid employment generation of the marginalized people; achieving Millennium Development Goals (MDGs) especially eradication of extreme poverty and hunger, gender equality and women empowerment. SME sector has played a vital role in economic development of some developed countries of Asia especially Japan, Korea and Malaysia. Most of the Asian developing countries have also given due importance on SME. Terming SME as 'employment generating machine' they stressed on SME development for higher economic growth, narrowing the gap of income inequality and poverty alleviation. The present government of Bangladesh has also put much emphasis on the development of SME sector considering it as 'the driving force for industrialization'.

The Bangladesh Government declared Vision-2021 which is the golden jubilee of the achievement of independence of Bangladesh. Vision-2021 is the first document of its kind in Bangladesh which presents a roadmap for the country's economic development. It projects that contribution of the industrial sector to the Gross Domestic Product (GDP) would increase from 28 per cent (2008) to 40 per cent, contribution of the agriculture and service sectors would fall from 22 per cent and 50 per cent (in 2008) to 15 per cent and 45 per cent respectively by 2021. That means emphasis would be put on local industrialization and rehabilitating the surplus labor force of the agriculture sector in the industrial sector. To implement Vision-2021, the Planning Commission has drawn up the Perspective Plan of Bangladesh (2010-21). Targeting to achieve the annual GDP (gross domestic product) growth rate of 10 per cent by 2021 is premised on a competitive manufacturing sector growing at or nearly a double-digit rate during the 2010-21 period. Consequently, the broad industrial sector will continue to account for a much larger share of GDP, approaching 37 per cent by 2021, compensating for the decline in the share of the agricultural sector, which will fall to 15 per cent. Vision 2021 stipulates the middle income status for Bangladesh by 2021 with the achievement of an annual GDP growth rate of 10 per cent by that year and averaging 9.2 per cent for the period of 2011-21. Fulfillment of this vision requires good performance of the manufacturing sector to take its share in the GDP to 27 per cent by 2021 and that of the industrial sector to 37 per cent. The small and medium enterprises (SMEs) sector is given priority in the National Industrial Policy-2010. It has considered the SMEs as the thrust sector by considering the planned and balanced development of these labor-intensive industries as the engine of growth. Therefore, a

well-planned financing framework for the SME sector of Bangladesh is absolutely essential for ensuring its sustainable growth and development.

1.2 Objectives of the study

The study focuses on the financing framework of SMEs in Bangladesh as well as check current SME legal framework in Bangladesh. The specific objectives of the study are to: i) examine the role of SMEs in the economy of Bangladesh ii) analyze the current regulatory framework and government support for SMEs' financing in Bangladesh iii) depict current SME financing status in Bangladesh and; iv) identify the major financing and regulatory constraints/challenges to the amelioration of SMEs in Bangladesh; and v) finally put forward some specific recommendations to overcome those challenges and thereby ensuring future growth and sustainability of SMEs in the country.

1.3 Methodology

The study is mainly based on secondary data. Published materials of Bangladesh Bank, Bangladesh Bureau of Statistics, Ministry of Finance, Various Commercial Banks, World Bank and relevant writings of some scholars are the main secondary sources. Unpublished data have also been collected from various departments of Bangladesh Bank. Primary data have been collected through interviews of bank officials from relevant desk. The collected data have been processed manually and presented in order to make the study more informative, analytical and useful for further study.

1.4 Organization of the Paper

The paper is organized into seven sections. The first section describes the background, objectives and methodology. The introductory section is followed by the role of SMEs in Bangladesh economy. Third section depicts SME development and financing framework of Bangladesh. Similar frameworks of APEC countries having distinct characteristics are also discussed. Section four presents status of SME financing in Bangladesh. Section five portrays constraints/challenges to SME financing and development in Bangladesh. Section six exhibits how SMEs can be improved to have better access to finance for its sustainable development. Finally recommendations and conclusion are presented in section eight.

2. The Role of SMEs to Bangladesh Economy

There is now a well established recognition of the role that Small & Medium Enterprises (SMEs) play in developing economies. They will often also exhibit (i) greater business flexibility, (ii) a tendency to apply technological advances and, (iii) general production and distribution efficiencies. Although governments recognize the benefits of a healthy and growing SME sector, their policies are not always well-aligned to provide optimum support to the development of SMEs.

The recent available estimates obtained from two major micro surveys, International Consulting Group (ICG) study and South Asia Enterprise Development Facility (SEDF) survey suggest the SME contribution to manufacturing value added to be in the range of 20

to 25 percent (Ahmed 2008; Bahar and Uddin 2007). More than three quarters of the household income in both urban and rural areas are provided by the MSMEs (Rahman 2007). The estimated number of SMEs in Bangladesh varies from 6m (an estimate from the ADB[3]) to the 3.3m registered SMEs in the country. SMEs make up 80% of industry employment, and 90% of all enterprises in Bangladesh[4]. Their total contribution to export earnings varies between 75% and 80%, according to a recent economic census. In terms of GDP, SMEs contribute a quarter in Bangladesh[5]. The contribution of agriculture to GDP is similar to that made by SMEs, with some overlapping.

Currently the economy of Bangladesh is witnessing transformation from an agro-based economy to an industrial one. According to the Word Development Indicators Study Report published by the World Bank, the contributions of industry and agriculture to GDP were respectively 21.7 per cent and 30.4 per cent in 1991, 25.9 per cent and 24.1 per cent in 2001, 28.5 per cent and 18.6 per cent in 2010. As per recent statistics of Bangladesh Economic Review-2014, the contributions of agriculture and industry to the GDP were 13.09 per cent and 29 per cent respectively in the fiscal year 2012-13. At this transformation period, SMEs can play a vital role as the engine of growth and reduction of unemployment and poverty in Bangladesh.

3. SME Development and Financing Framework of Bangladesh

For the purpose of SME development and financing in Bangladesh, the following four-tier structure is set up. Tier1-National Council for Industrial Development(NCID) [Headed by Hon'ble PM]; Tier2- Executive Committee of National Council for Industrial Development (ECNCID) [Headed by Hon'ble Minister for industries]; Tier3- National SME Taskforce[headed by principal secretary to the Hon'ble PM]; Tier4- Coordination Committee [Headed by Secretary Ministry of Industries]. Other Major Stakeholders of SME Development in Bangladesh are: Ministry of Industry- Bangladesh Small and Cottage Industries Corporation (BSCIC) ,Small and Cottage Industries Training Institute(SCITI), Bangladesh Industrial Technical Assistance Centre(BITAC), Small and Medium Enterprise Foundation (SMEF) like OSMEP of Thailand; Ministry of Finance; Ministry of Information Technology; Ministry of Youth and sports; Ministry of women and children affairs; Bangladesh Centre for Scientific and Industrial Research(BCSIR) etc. The Private sector SME development stakeholders are: The federation of Bangladesh Chambers of Commerce and Industry (FBCCI); Dhaka Chambers of Commerce and Industry (DCCI); Metropolitan Chambers of Commerce and Industry (MCCI); National Association of Small and Cottage Industries in Bangladesh (NASCIB); Sector Level Associations; Private sector research and civil society organizations; Universities etc.

3. Asian Development Bank, 2009, Bangladesh Financial Sector: An Agenda for Further Reforms, Manila
4. Giesen and Lincing, 2006, Enterprise Structure in Bangladesh
5. MIDAS, 2009, Women Entrepreneurs in SMEs: Bangladesh

3.1 Bangladesh Bank (BB) strategies for SME financing and development

Bangladesh Bank (BB) has taken strong initiatives for SME sector development and its financing. BB’s Policy regime has skewed in favor of the financially excluded and unbanked mass of the country, specially, towards the SME entrepreneurs with particular emphasis given to small entrepreneurs and women entrepreneurs. It has also given more emphasis on manufacturing and service sector that are more capable of generating employment, equitable and enhanced economic development; and traditionally developed industry clusters. Honorable Governor of Bangladesh Bank, Dr. Atiur Rahman took two milestone decisions:(1) Creation of new department for looking after SME development and financing activities and (2) Publication of a comprehensive guidelines for the banking sector to streamline SME lending and promotion activities in the banking sector. The goals of these decisions are: (1) Achieving enhanced economic growth; women empowerment; poverty alleviation and realizing the full potential of SME sector in development and (2) Creating a strong SME banking ecosystem.

BB's SME sector Development strategies are two pronged: (1) Comprehensive policy guidelines to steer the banking sector towards the SME banking space 2) Providing a window [Refinance fund] of low cost funds for the banks and Fls to guide them to the targeted SME segment so that a credit market is developed in that segment. As per these strategies, Bangladesh Bank has issued SME credit policy and programs where a number of new measures have been taken as follows: (1)Targeted Credit Initiative(TCI), (2) Cluster Based Lending(CBL), (3) Women Entrepreneurship Development(WED), (4) Promotion of SME issues, (5) Training [for bankers and entrepreneurs], and (6) Incentives for bankers.

3.1.1 Refinance Window/Scheme of BB

To overcome the financial constraints of the SME sector and induce banks and Financial Institutions to provide credit facilities to SMEs, BB is running the following dedicated refinancing funds for SMEs at a subsidized interest rate (bank rate) which is now 5%: (1) Bangladesh Bank Fund of BDT 6.00 billion [revolving]; (2) Women Entrepreneurs Fund of BDT 2.63 billion [revolving]; (3) ADB Fund of BDT 7.00 billion [revolving] to Provide loan to SME enterprise outside two major metropolitan areas; (4) JICA Fund of BDT 4.5 billion to provide medium to long term credit for investment in productive facilities. (5) Agro based Product Processing Industries Fund is BDT 2.00 billion to provide Loan for agro based and agro product processing industries development.

3.1.2 Cluster Based Lending (CBL)

Cluster is a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field. Clusters are considered to increase the productivity with which companies can compete, nationally and globally. Benefits of Clusters are: increasing productivity, driving innovation, and building new business. Bangladesh Bank, SMESPD has so far identified more than 100 clusters around the country. BB has assigned individual banks to each of the clusters .Cluster based targets are

also taken. Active support is being given to banks in financing on a cluster based approach.

3.1.3 Financing for Women Entrepreneurship Development (WED)

The initiatives which have been taken for Women entrepreneurship development (WED) are: (1) 15% of all refinance window to be specified for WE (2) A 10% target for WE lending of total SME (3) Interest rate cap for WE loan under BB refinance Window (bank rate + 5%); currently 'bank rate is 5% (4) WE loan application to be given priority (5) WE facilities provided by banks to be broadcasted in mass media (6) Group based lending allowed to WE (7) Up to Tk. 25 million clean exposure limit for WE [without any collateral] (8) WE dedicated help desk to be opened by the banks & FIs.

3.1.4 Monitoring of SME credit by BB

Bangladesh bank has started strong monitoring of SME Financing and SME promotion at three levels: BB Head office; BB branch offices and Banks & FIs Head offices. The Key Monitoring Areas (KMAs) are: (1) Target achievement (2) Sectoral Distribution (3) SE-ME ratio (4) Women Entrepreneurs financing (5) Geographical distribution (6) Cluster financing (7) NPL. The Key Monitoring Indicators (KMIs) are: (1) Target achievement percentage (2) Sectoral composition of disbursed loan [Percentage distribution] (3) Percentage of Small Enterprise loan to total SME loan disbursement [A minimum of 40% of total SME portfolio] (4) Percentage of Women Entrepreneurs credit compared to total SME disbursement [10% targeted] (5) Percentage of SME NPL to total SME outstanding and total loans and advances outstanding. The monitoring tools are: (1) Quarterly Reporting to BB HO (2) Simultaneous Reporting to BB branch offices (3) Mobile Monitoring (4) Monitoring cell at HO and branch offices (5) On-site inspection by SMESPD & BB branch offices (6) On-site examination by Department of Banking Inspection (SME).

3.1.5 BB's Training & Capacity Building Program

BB Provides training to bank officials on SME development through BBTA and SMESPD. BB encourages banks and NBFIs to organize management skill training and financial literacy training for the existing customers and prospective customers. It also arranges joint program with international organization (IFC, WB, ADB, UAID, EU, JICA etc.) for capacity building of the BB's staff members and for the commercial bankers as well. Apart from this, BB is rigorously supporting SME development initiatives of other stakeholders through handholding with other organization in SME development such as (1) Arranging stakeholders meeting with Chambers of Commerce & Industries, Trade bodies, SME promotion agencies of the government and Other stakeholders (2) holding joint workshop/seminar (3) extending marketing support to bankers and entrepreneurs through financing fair for entrepreneurs and bankers as well as SME products fair for supporting and developing marketing channel for the SMEs (4) Joint program with other public & private sector stakeholders in

SME development. BB has also set up (1) SME help desk at the BB head office (2) Mobile monitoring from BB Head office (3) Entrepreneurs complaints handling cell and (4) Mobile/phone helpline for the entrepreneurs for banking related services and business development services.

A SME development Project called INSPIRED with the financial assistance of EU has also been undertaken by Bangladesh Government. INSPIRED is funded by the Government of the People's Republic of Bangladesh and the European Union with the objective of developing SMEs in Bangladesh. It is managed by the SME Cell of the Ministry of Industries. The SME Foundation, Bangladesh Bank, Bangladesh Bank Training Academy (BBTA) and Bangladesh Institute of Bank Management (BIBM) are other implementing agents of this project. The aims of the project are to: (1) deliver a multi-sectoral and inter-ministerial national strategy and action plan for SME development which addresses all aspects of SME support including improving the business environment in line with accepted international best practice; (2) develop a strengthened national capacity to plan and implement SME development; (3) establish effective SME networking mechanisms aimed at sharing best practice; (4) provide a SME Competitiveness Grant Scheme of EURO 6.5m to Business Intermediary Organizations such as Chambers Of Commerce and Industry or cluster associations to work with groups of SMEs to improve their competitiveness in the following sectors: agro-processing, natural fibres, leather, plastics, light engineering, electronics, furniture and textiles; (5) support clusters by using value chain development initiatives that seek to increase SME competitiveness in agreed sectors and provide capacity building to business intermediary organizations (BIOs) in lobbying, advocacy, networking, public-private sector dialogue and the provision of business development services (BDS) to their members; and support bank training institutions in Bangladesh for the benefit of the entire banking industry by providing training courses for bank staff on providing appropriate banking services to SMEs.

3.2 Government Support to SME Financing Schemes

SME Cell and SME Foundation: Considering the importance of SME financing, a SME cell has been created in 2003 in the Ministry of Industries (MoI). The cell has announced that 80 percent of total resources available for SME would be allocated specially for small enterprises. The SME cell also decided that BASIC and BRAC bank will be working together as lead banks and will be responsible for distribution of credit and venture capital fund in the short run. The SME Foundation (SMEF) is an independent organization established in 2007 with a view to making it an Apex body for looking after the SME sector. The SMEF is capitalized by the Government of Bangladesh with a total endowment of Tk.2 billion. In order to facilitate low cost credit to SMEs, the SME Foundation started credit wholesaling program of Tk. 2.00 crore and it is being implemented by MIDAS Financing Ltd. and Shakti Foundation on a pilot basis. The Foundation developed guidelines for conducting its credit wholesaling program so that SMEs can receive credit at a single digit interest rate under Program through partner organizations. The SME Foundation expects that the SME credit wholesaling guidelines would enable it to reserve

Small and Medium Enterprises Development in Bangladesh refinancing funds and give it to banks and financial institutions at rates lower than that of the Bangladesh Bank. The Women Entrepreneurship Development Wing of SMEF seeks to promote the creation of favorable environment for women entrepreneurs through capacity building and bring them in the mainstream of development process and facilitate effective support for these target groups as well as extend support to women's trade bodies/associations for their building institutional capacity and competitiveness. Apart from this, various government organizations including specialized banks are engaged in providing credit to the SME sector. A specialized bank, the BASIC Bank Limited (Bangladesh Small Industries and Commerce Bank Limited) was established in 1988 with the foremost objective of financing the small and cottage industries (SCI). It functions through 17 selected NGOs due to the high cost of operations. BASIC is mandated to provide 50 percent of loanable fund to small and medium industries and to follow strategies of Industrial Policy 2010. The bank also offers lower interest rates on SME lending compared to most other banks.

Besides institutional and policy support for finance, the government also offers a number of fiscal and financial support to the industrial sector including SMEs. The government has lowered duty on import machinery. Value Added Tax (VAT) is not payable on import of capital machinery and spares. The government also decided that small and medium manufacturing units would get a complete VAT exemption on utilities including electricity and phone, and insurance services.

4. Status of SME Financing in Bangladesh

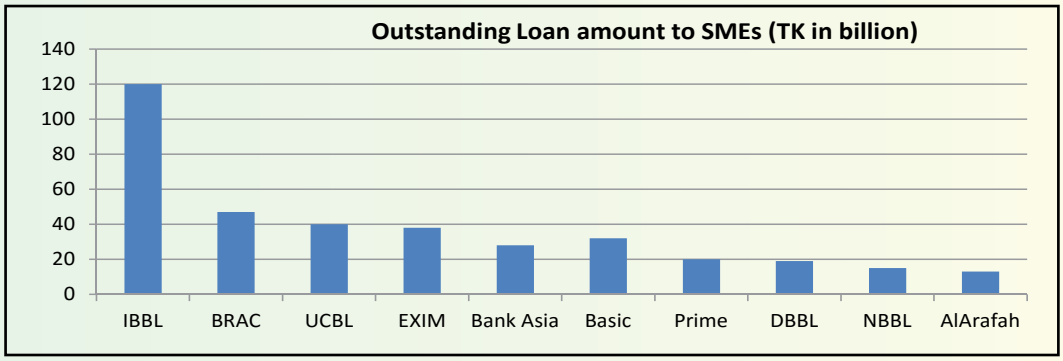
The honorable Governor of BB, Dr Atiur Rahman, has emphasized the importance of investment in SMEs to make the country self-reliant and self-sufficient. He has noted that the contribution of the SME sector to employment generation is next only to agriculture. According to him, “Commercial banks have been playing a tremendous role in this regard through the timely guidelines from the BB (Daily Star, 24 April 2012).” Banks, Non-bank Financial Institutions, Co-operatives and various associations are the main formal providers of finance to the SMEs in Bangladesh.

There are 56 scheduled banks in Bangladesh which are classified into the following four types: State Owned Commercial Banks (SOCBs), Specialized Banks (SBs), Private Commercial Banks (PCBs), Foreign Commercial Banks (FCBs). There are 31 NBFIs operating in Bangladesh of which two are fully government owned, one is the subsidiary of a SOCB, 13 were initiated by private investors and 15 are joint ventures.

Although financing of SMEs are largely dependent on equity financing from personal and family savings, from friends & relatives, at present banks and financial institutions are also coming forward to provide finance to this sector. Different initiatives have already been taken by the financial institutions in order to facilitate the SME financing such as: separate SME division, SME units/centers and dedicated desk; separate SME dedicated desk for women entrepreneurs; Separate monitoring team for SME; separate team for selling loan and collecting deposit through SME products; special credit risk management team for

SME banking; different trainings for SME officials as well as for entrepreneurs; commission/incentives based on the performances of direct sales team; dedicated collection team for SME loan; customized products and services for SME; establishment of SME/Krishi branch; delegate loan authority to the branch managers and head of SME up to a certain limit for quicker decision; 24 hours call center and doorstep banking; organizing SME service fortnight in every years; develop clusters under area approach etc. Figure-1 shows that Islamic Bank Bangladesh Limited(IBBL) has disbursed the highest amount of SME loans among the top SME financier banks. IBBL being the shariah based bank has given more importance on small and medium enterprise development banking.

Figure 1: Largest bank lenders to SMEs, 2013



Source: Author's calculation.

Table 1 highlights the current status of the SME outstanding loan as percentage of total loan provided by the banks and non-bank financial institutions operating in Bangladesh. In 2012, SOCBs outstanding loan was the highest (27.10%) compared to SBs (21.03%), FBs (11.51%), and PCBs (22.78%) in the banking sector. The average of all banks showed that the total outstanding loan in the SME sector was 21.32%. It is observed that the FBs' outstanding loan in this sector was the lowest, only 11.51%. In case of the NBFIs, the total outstanding SME loan compared to its total loans and advances was 13.72%. The average of all banks and NBFIs was only 21.01%. There is ample scope for investment in this sector by the banks and NBFIs.

Table- 1: Current Status of SME Loan outstanding as percentage of Total Loan (Tk. In Crore)

	2012		2013	
Name of Banks/NBFIs	Bal. Outstanding of SME Loan	% of SME outstanding to Total Loans	Bal. Outstanding of SME Loan	% of SME outstanding to Total Loans
SOCBs	24534.26	27.10	22943.56	28.15
SBs	5104.05	21.03	7568.30	23.74
FBs	2395.66	11.51	2085.89	12.85
PCBs	55420.91	22.78	69529.16	20.72
Total Banks	90254.88	21.32	102126.91	21.88
NBFIs	2992.74	13.72	2979.38	12.97
Total Banks & NBFIs	93247.62	21.01	105106.29	21.11

Source: SME & SPD, Bangladesh Bank

In 2013, the table shows that SOCBs outstanding loan in SME sector was 28.15%, which has increased compared to that of the previous year. The percentage of SME outstanding to total loans for each group of financial institutions is shown to be very similar for both the years. But the average of all banks and NBFIs represents 21.11% which is slightly higher than that of the previous year (21.01%).

Table- 2 shows the disbursement of small and medium enterprises loan separately on the basis of the total SME loans disbursed by the banks and NBFIs in Bangladesh. In 2012, the aggregate disbursement in small enterprises by all banks and NBFIs was 55.27%, while the aggregate disbursement in medium enterprises by all banks and NBFIs was 44.73%. Therefore, the banks' and NBFIs' total SME loan disbursement was concentrated more in small enterprise sector and less in medium enterprises sector.

Table- 2: Disbursement of SME Loan by Banks and NBFIs (Tk. In Crore)

	2012		2013	
Banks/ NBFIs	Small	Medium	Small	Medium
SOCB	1119.36 (58.49)	794.82 (41.51)	2374.81 (57.10)	1784.07 (42.90)
SB	766.25 (43.06)	1023.42 (56.94)	1190. 48 (46.44)	1373.07 (53.56)
FCB	312.20 (44.08)	394.03 (55.92)	585.55 (47.17)	655.80 (52.83)
PCB	15128.53 (55.93)	11922.14 (44.07)	20714.05 (46.96)	23395.67 (53.04)
Total Banks	17326.84 (55.09)	14126.41 (44.91)	24864.89 (47.75)	27208.61 (52.25)
NBFIs	502.05 (62.57)	300.31 (37.47)	991.22 (60.22)	654.72 (39.78)
Total Banks & NBFIs	17828.89 (55.27)	14426.72 (44.73)	25856.11 (48.13)	27863.33 (51.87)

Source: Author's calculation, Data: SME & SPD, Bangladesh Bank.

In 2013, the concentration of total SME disbursement in small enterprises decreased to some extent from 55.27% to 44.73%, whereas, the disbursement to medium enterprise sector went up and stood at 51.87%.

Table- 3 highlights on the sector-wise disbursement of SME loan by the banks and NBFIs in Bangladesh. The disbursement of SME loan was categorized as service sector, trading sector and manufacturing sector.

Table- 3: Sector-wise Disbursement of SME Loan (Tk. In Crore)

Year	2011			2012		
Banks/ NBFIs	% to Service Sector	% to Trading Sector	% to Mfg. Sector	% to Service Sector	% to Trading Sector	% to Mfg. Sector
SOCB	3.94	60.67	35.39	2.82	58.06	39.12
SB	2. 41	52.21	45.37	5.84	53.52	40.64
FB	15.00	48.59	36.41	9.74	50.57	39.69
PCB	6.56	68.82	24.61	4.97	67.01	28.02
Total Banks	6.35	66.87	26.78	4.99	65.33	29.68
NBFIs	25.67	43.70	30.63	23.85	46.03	30.12
Total Banks & NBFIs	6.94	66.16	26.90	5.47	64.85	29.68

Source: SME & SPD, Bangladesh Bank.

In 2011, the aggregate average of SME loan disbursement by the banks and NBFIs was 66.16% in trading sector, 26.90% in manufacturing sector and 6.94% in service sector. On the other hand, the 2012 figures revealed that 64.85%, 29.68% and 5.47% were disbursed in trading, manufacturing and services sectors respectively by the banks and NBFIs. .

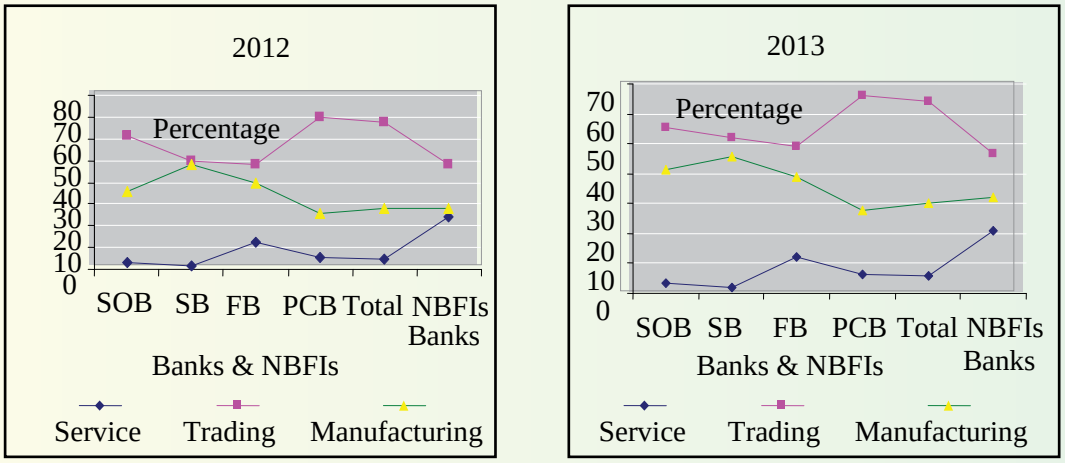
Table 4: Disbursement of SME Loan to the Women Entrepreneur (Tk. In Crore)

Banks/NBFIs	2011			2012		
	Total Disbursement	Disbursement to Women	% of Disbursement	Total Disbursement	Disbursement to Women	% of Disbursement
SOB	7723.99	73.89	3.51	2107.98	31.73	3.38
SB	2594.65	58.03	4.73	1225.89	43.98	6.72
FB	1033.92	2.88	0.49	592.12	1.28	0.46
PCB	40494.58	806.81	3.79	21302.00	348.32	3.51
Total Banks	51847.14	941.61	3.73	25227.99	425.31	3.61
NBFIs	1696.79	40.12	4.29	935.35	21.89	5.27
Total Banks & NBFIs	53543.93	981.73	3.75	26163.34	447.20	3.66

Source: SME & SPD, Bangladesh Bank.

Table 4 shows the status of SME loan disbursement to the women entrepreneurs by the banks and NBFIs in Bangladesh. In 2011, the average disbursement of SME loan for women entrepreneurs to total SME loan disbursement was 3.73% by all banks and 4.29% by NBFIs. The aggregate disbursement by all banks and NBFIs was only 3.75% in 2011. In 2012, the aggregate disbursement to women entrepreneurs by all banks and NBFIs was 3.66%. It would be a worthy contribution to the society and to women entrepreneurs if the banks and NBFIs can disburse more SME loan to them. In this context it is appropriate to make a review of the available institutional support for SMEs and the problems faced by women entrepreneurs. Studies on SMEs have revealed that while SME loans are largely meant for meeting the needs of working capital, such loans meet around a third of the demand. The rest is met from own source, and partly by bank loans under other heads, friends/relatives and NGO sources.

Figure 2: Sector wise SME Access to Finance in Banks and NBFIs



4.1 SME Development and Financing Framework in APEC Economies

4.1.1. Indian Framework: A large number of SME promotion agencies, including a full-fledged ministry, are working to develop and promote SMEs in India. Notable Indian SME development and promotion agencies are the Ministry of Micro, Small and Medium Enterprises, MSME Development Institute, SME Development Chamber of India, SME Export Promotion Council, Entrepreneurship Development Institute of India, SME Rating Agency of India Limited, India-Korea SME Council, Small Industries Development Bank of India, and the Federation of Indian Micro and Small and Medium Enterprises etc. Relevant agencies are conducting diversified types of research on different SME issues in India as well as abroad. Indian SME organizations have branches abroad to promote and support Indian SME entrepreneurs there.

Cluster development is a popular mode of SME development in India. In addition to these SME organizations, a large number of public and private sector organizations are working with cluster development in India. Indian SME organizations are publishing both free-of-cost and for-sale publications including business plan, identified potential business sectors, business opportunities at home and abroad, business directories, directory of industrial laboratories, handbook to minimize risk in export market, and mandatory and non-mandatory standards on different industrial products in different countries. They also promote a few common activities like organizing seminars, workshops, trade fairs, and linking businessmen with concern networks.

4.1.2 Malaysian Framework: The government agency to develop and promote SMEs in Malaysia is the SME Corp. The SME Corp is one of the leading organizations in Asia for SME development in terms of activities and areas focused. Technology development is one of their major activities; they assist SMEs to adopt new technology, increase productivity,

automation, select appropriate technology and machinery, update production process and production management etc. Soft SME loan, Shariah-based SME loan and emergency fund for SMEs are their unique services in the region. Other mentionable activities of the SME Corp are capacity building, advisory and technical services, SME rating, SME university linkage, SME mentoring, national brand seal on SME products, SME expert panel database, company registration, company enlistment, publications and online SME services etc.

4.1.3 Japanese Framework: The systematic government support encompasses SMEs in Japan from start to end. Development framework of SMEs in Japan is rich with establishment and enactment of required laws, encouraging cooperative associations, training, guiding, academic and research support above all treating SMEs with the whole package of services through main banking system and providing all kind of financing. The Organization for Small and Medium Enterprises and Regional Innovation, Japan serves the SMEs from four major aspects namely, support start-ups in new business development, support for SME growth and development, providing safety nets and infrastructure.

4.1.4 Vietnamese Framework: The Agency for Enterprise Development under the Ministry of Planning and Investment is responsible for SME development and promotion in Vietnam. It is implementing SME development policies and providing a series of services to the Vietnamese SME entrepreneurs including linkage with technology suppliers, regulatory consultations, establishing industry export and hi-tech zone, publishing business directory, directory of SME associations, directory of SME experts, directory of SME loan products being offered by SME banks etc.

4.1.5 Chinese Framework: The Bureau of China International SME Fair is the SME promotion government agency in China. They organize yearly SME fair, technology fair, world conference, boutique fair, seminars, workshops, work with environment-friendly SME development, providing youth entrepreneurs loan, providing start-up loan etc.

5. Constraints/Challenges to SME Financing and Development in Bangladesh

SMEs are heterogeneous by their characteristics, mode of operation and types of SME products and processes. As such it is difficult to make sweeping generalization about constraints facing SME entrepreneurs. However, some of the constraints are discussed below:

5.1 Lack of Investment Finance and Working Capital Finance

It goes without saying that access to finance particularly working capital finance and investment finance to enable them to expand their business is a prime constraint facing the SMEs. Banks in general do not consider SME financing as profitable activity. SMEs are also regarded as high risk borrowers because of their low capitalization, insufficient assets and high mortality rates, and consequently banks are not keen to offer them credit at comparable interest rates. SMEs in the export sector also face problems of access to working capital.

5.2 Enabling environment for Trade and Business

Although trade and business activities are carried out by the private sector, existence of enabling environment like supportive regulatory framework, congenial tax regime, developed transport and communications infrastructure is vital for SME development. Bangladesh has made some progress in this direction but it still falls short of present day needs. Other constraints of a general nature are inefficient infrastructure support especially power, widespread tariff anomalies, low productivity of labor, low level of technology, lack of research and development and low level of education of SME entrepreneurs in general.

5.3 Non-Tariff Barriers (NTB) and Changes in World Trade Regimes

Liberalization of industrial and trade regimes in the wake of globalization are likely to have significant effects on Bangladesh's SMEs. Over the past decade, there has been a significant change in the world trade regime with new regulations coming into effect. Lack of knowledge about the current status of WTO Agreements hampers trade and business.

5.4 Barriers in access to finance for women entrepreneurs

Discrimination still exists regarding access to finance by women entrepreneurs. Studies show that women contribute around 26 per cent in total deposit of the banking system but their access to credit is below 2 per cent of the total outstanding loans. This is an unfortunate situation. Access to finance is one of the most critical constraints faced by women entrepreneurs. Most of the banks have SME banking, a few women apply for the bank loans as they need to submit a number of statements such as bank statement of the enterprise, reference of guarantor etc. for collateral free loans. Banks usually consider women entrepreneurs in SME to be high-risk borrowers. Lack of collateral makes women entrepreneurs more risky for banks. Most of the small women entrepreneurs do not have a credit history, and so there is no CIB report on them. These barriers induce female entrepreneurs to take recourse to informal sources of finance.

5.5 Inability to Market SME Product

The present and future growth prospect of any product depends to a large extent upon marketing activity. This requires having a well-planned marketing strategy including advertisement campaign as well as resources for implementing that strategy. Unfortunately, SME entrepreneurs are at the bitter end in this respect as they cannot make adequate investments in marketing and also lack necessary marketing skills.

5.6 Inability to Maintain Product Quality

A major constraint to the sustainability of SME growth in Bangladesh is the inability to maintain the quality of SME products. At present, Bangladesh produces mostly common consumer good which are labor-intensive and require relatively simple technology. But due to poor quality these products cannot stand competition from imported products. The

challenge for Bangladesh today is not in competing with high-tech products of developed countries but to make its SME sector survive by facing the competition from its rivals.

5.7 Lack of Skilled Technical Persons and Workers

Lack of skilled manpower is a deep-rooted problem in Bangladesh. This problem is particularly acute for small and medium scale export oriented enterprises. Bangladesh has made large inroads in the world's apparel market through commendable performance of RMG sector. However, the value addition of the products is low. Despite high demand, Bangladesh cannot make much entry into high value fashion wear exports due to dearth of trained workers. Supply capacity is thus constrained by non-availability of skilled workers.

5.8 Poor Management Skills of Entrepreneurs

In the modern day economy, managerial skills for undertaking planning, marketing, and cashflow management are vital for survival of an industry, small or large. SME entrepreneurs in Bangladesh are very much lacking in managerial skills and are not used to strategic planning. It is natural that they are unable to survive during market failures. The concept of managerial training for SME entrepreneurs is yet to take root in Bangladesh.

6. How SMEs can be improved to have for better access to finance

Three main problems which are given in box-1 are associated with the SME entrepreneurs for not getting the requisite finance for their businesses. There are a number of steps that can be taken for SMEs to overcome these problems and improve their prospects for obtaining funding for their business, based on the analysis of what banks often require. The keys to success revolve around three main initiatives: seeking the best financing product; putting "the best foot forward" in the application process; and changing the business operation for the better.

6.1 Seeking the most appropriate financial product

The first step is to consider what type of product is needed. This requires the SME to have a full understanding of its future financing needs which, in turn, will require it to develop some sort of a business plan, with details on its operation, products, employees, marketing and processes. It is then a matter of determining what type of product and what quantum of funding best meets the SME's financing needs.

Having agreed with the appropriate product or products, the SME should then look for the lender and/or provider most aligned with its interests. Considering the product terms, understanding and comparing interest rates is important and fees that banks charge on top of the stated interest rate must also be considered. Finally, other terms can be just as crucial as the interest rate. There may be steps that the borrower must take which are time-consuming or expensive, e.g. registration of title or formal business licenses. If the required reporting regime is too burdensome, this adds to the effective cost of the loan. In addition, the borrower should ensure that the repayment terms of the loan align with its expected cash flows.

Box-1:SME Funding Issues

A. Project Preparation: The first problem entrepreneurs face in seeking institutional finance is with regard to preparation of the project proposal. In spite of directives from the central bank to follow standardized procedure, the loan application process has still remained lengthy and cumbersome. The entrepreneur often lacks the ability to formulate a proper project proposal. Even when he prepares the proposal drawing on outside expert services, there is no guarantee that the proposal will be evaluated properly as the financial institutions themselves lack adequate capability for proper project evaluation.

Prerequisites, e.g. track record are a real problem for start-ups, business including loan proposal high processing and monitoring costs. The loan application forms are themselves often long, tedious and requiring redundant information.

Agriculture is seen as most at risk by lenders involving factors such as weather, diseases and changes in official policies.

B. Collateral Requirements: One of the main factors that have hampered flow of institutional finance into SMEs is banks' pre-occupation with collateral based lending. Traditionally banks have used fixed asset ownership, particularly land ownership as the basis for judging credit-worthiness. This puts SMEs at a relative disadvantage, as large entrepreneurs are often able to get around the problem because of their influence and contacts by putting up collateral of dubious valuation. The solution to this problem lies in banks seeking deposit relationship with owners of SMEs and using cash flow rather than asset ownership as the criterion for credit-worthiness. An expanded credit guarantee scheme will have to play a vital role in this regard.

C. Bureaucracy and Corruption: Because of lack of proper autonomy and accountability, the public sector financial institutions are beset with inflexibility, inefficiency, political interventions and corruption. Since the performance of the bank officials is not properly evaluated they lack the incentive to bring a large number of suitable borrowers, particularly those in the SME sector, within the fold of institutional financing. They adopt a passive and inflexible attitude towards the borrowers either to avoid the risk of making an inappropriate lending or to force the borrower to make side payments for more favourable handling of the loan application. Until necessary reforms in the public financial institutions are carried out, the SMEs will continue to bear the brunt of this institutional malice.

Source: Rahman (2010)

6.2 Maximizing the SME's ability to qualify for finance

Some of the key elements that a borrower must consider well in advance include: (1)Title to property to allow for collateralization (2) If collateral cannot be provided, the capacity

to provide alternatives, such as security over assets liens, guarantees, and post-dated cheques (3) The ability to meet lenders' minimum client criteria, especially years of business operation (4) Physical access to financial services through visiting the bank branch or lending officer (5) An ability to prepare the loan application, given the complexity of some of the banks' forms. Preparing for the detailed reporting required as part of the lender's loan monitoring.

It is generally recognized that guaranteed schemes in various forms are required by the SMEs along with customized financial products. The SMEs are in especial need for longer-term resources. The Bangladesh Bank propagated some options for enhancing financial facilities to the SME sector of the country. In addition, banks and financial institutions can be encouraged to offer more and more innovative financial products such as factoring, venture capital, etc. However, the SME entrepreneurs as well as the financial instruments providers should be well acquainted with such products. Academicians and experts, time and again, opined for a dedicated new financial institution for SME in order to provide sufficient, long-term, low-interest funds with liberal terms of collateral.

7. Recommendations and Conclusion

From the above discussion and analysis, we can see that a well-designed plan of action is required for creating an enabling environment in which both existing and aspiring SME entrepreneurs easily find what they really need such as information, counseling, mentoring, access to finance, marketing and technical assistance. Financing SMEs is one of the key prerequisites for the achievement of growth of this sector. In Bangladesh also, the small entrepreneurs - both entrants and existing - significantly face obstacles in access to finance. To maximize the benefits of financial structures, the provision of finance should be accompanied by parallel efforts to improve the investment climate and to develop other SME support services. Various studies revealed that financial opportunities or higher effective rates of assistance provided earlier to the SMEs have contributed to the inefficiency in the sector. Therefore, the following measures may be undertaken to overcome the challenges and thereby ensuring better financing and development of SMEs in Bangladesh:

One, SME Custer Development: SME Foundation has identified 177 SME clusters all over Bangladesh. It is easy to transform these SME clusters into SME export processing zones, if the government and development organizations pay proper attention to it. A balanced development is possible, if the SME clusters are developed, because the clusters are located in different districts, upzillas, unions and even in villages throughout the country. It requires minimum resources to ensure all industrial facilities and utility services available in a specific area to develop an industrial cluster and get maximum output from it. More training and counseling should be provided to bank employees so that they can follow cluster-based lending approach. There is no cluster-based financing policy in

Bangladesh. Bangladesh Bank should formulate cluster-based financing policy for its maximum flourishment.

Two, Diversification of Exports: The export basket of Bangladesh contains only a few products. Therefore, it is necessary to identify products having export potential and diversify the products in the export basket. Development of export-oriented SMEs could lead to robust employment generation, increase in export earnings, more GDP and poverty alleviation.

Three, Introducing an Industry-friendly Tax Regime and Justification of the Existing Tariff Structure: Export and import are linked with industrialization. Export without import of raw materials is quite difficult. Therefore, an industry-friendly tax regime should be introduced to promote local investments and attract foreign direct investment (FDI). The existing tariff structure should also be justified to promote local industrialization.

Four, Exploring Prospective Export Markets and Signing Free Trade Agreements: The government should take necessary measures to explore the prospective export markets for Bangladeshi products and sign free trade agreements with them to ensure Bangladeshi products' duty-free and quota-free market access there.

Five, Technological Upgradation and Increasing Productivity: Most of the industries in Bangladesh are lagging behind in terms of technology and productivity. As a result, we are unable to produce high-quality products for sale at competitive prices. Therefore, it is the government's duty to take necessary fiscal and monetary measures to facilitate technological upgradation to increase productivity of the local firms.

Six, Establishing Testing Laboratory and Assisting in Achieving International Quality Certification: Most of the industrial sectors are suffering from the lack of proper testing facilities for their products to ensure their world class quality. Therefore, Bangladeshi companies are not getting international quality certificates. As a result, foreign buyers are not accepting our products on a large scale in the absence of quality assurance. So, it is the government who could help local entrepreneurs establish sector-specific testing laboratories and get international quality certificates and thus increase the acceptance of Bangladeshi products to foreign buyers. It will help to build the brand image and charge premium prices for quality products.

Seven, Ensuring Adequate Supply of Raw Materials and Introducing a Syndicate Control Mechanism: Most of the industrial sectors are somehow dependent on foreign raw materials. Maximum SME entrepreneurs are unable to import raw materials directly for many reasons. By capitalizing on this limitation, a small group of importers import raw materials and charge irrational prices. It makes our products uncompetitive in the international market. For this reason, the government should allow sectoral trade bodies or owners' associations to import raw materials together in a group or introduce a syndicate control mechanism to ensure rational prices for raw materials in the local market.

Eight, Financing SMEs through venture capital: Banks in Bangladesh generally follow traditional collateral based lending and are not dedicated to financing SMEs. So, Bangladesh needs venture capital financing for ensuring better and adequate financing for SMEs, especially for the for angel firms as a remedial measure against the banks' collateral-based lending.

Most of the SMEs in Bangladesh today grew on their own initiative and own financing. Despite the criticism and neglect of the SME sector on the grounds of inefficiency and non-optimal use of productive resources compared to larger industries, SMEs are beginning to be extolled for their greater dependence on labor-intensive production techniques. It is also necessary to develop SME clusters, and export-oriented SMEs throughout the country to implement Vision-2021 and achieving the middle income status by 2021. As Bangladesh has limited resources to conduct R&D on SME, so replication of the best practices of the SME-enriched countries could be a better mode of learning for Bangladesh. The Bangladeshi SME development authorities may consider replicating best practices of the similar organizations abroad like the cluster-based SME development programme of India, broad-based inclusive financing scheme of Malaysia and South Korea, establishing common service centers, incubation centers, laboratories programmes of Japan, and promoting SME products through organizing trade fairs like China and such. Thus a better SME development and financing framework may be established for Bangladesh.

References

Ahmed, K. and Chowdhury, T.A. (2009). "Performance Evaluation of SMEs of Bangladesh". International Journal of Business Management, Vol. 4, No. 7.

Ahmed, M.U. (2008). "Report of the PRSP-2 Thematic Study on Small and Medium Enterprise Development in Bangladesh", Final Report, March.

Ahmed, M U. (1999). "Financing Small-scale and cottage Industries in Bangladesh". Journal of Finance and Banking, Vol. 5, No. 1 and 2.

Ahmed, Q. M. (1999). "Selected Issues in Small and Cottage Industries Sector: Bangladesh and Some Asian Countries' Context". Bank Parikrama, Vol. XVIII, No. 3 and 4.

Asian Development Bank (2009). "Bangladesh Financial Sector: An Agenda for Further Reforms". Manila

Bahar, H., Uddin, M.J., (2007). "Financing Small and Medium Enterprises in Bangladesh". Proshkhyan, Vol.15, No.1, January-June, Dhaka.

Bangladesh Bank (2008). "A Note on the Contribution of Small and Medium Enterprises to GDP in Bangladesh", Policy Paper 0806, Policy Analysis Unit, Bangladesh Bank.

Bangladesh Bank (2007). "Institutional Lending and Financing Policy for SMEs in Bangladesh",

Policy Note Series PN 0804, Policy Analysis Unit, Bangladesh Bank.

Bangladesh Bank (2006). “Access to Finance by Small and Medium Enterprises (SMEs)”. Financial Sector Review, Vol. 2, No. 1, December.

Bangladesh Bank (2004). “Prudential Regulations for Small Enterprises Financing”, Bangladesh Bank, 1st Edition.

Bangladesh Bureau of Statistics (2011). Report on Labor Force Survey, 2005-06, BBS, April.

Bangladesh Bureau of Statistics (2012). Economic Census 2010 and 2011, National Report, Dhaka.

Bangladesh Economic Review (2013). Economic Adviser’s Wing, Finance Division, Ministry of Finance, Dhaka.

Bangladesh Small and Cottage Industries Corporation, Various Publications.

Centre for Policy Dialogue (CPD) (2006). “Emerging Issues in Bangladesh Economy: A Review of Bangladesh’s Development 2005-06”. The University Press Limited.

Chowdhury, Farzana (2008). Factors Affecting Women Entrepreneurs Access to Finance in Bangladesh. Paper Presented at the Second National SME Women Entrepreneurs Conference, SME Foundation.

Chowdhury, Nuimuddin (2007). “SME Development in Bangladesh”, Ministry of Industries, Dhaka.

Dhaka Chambers of Commerce and Industries (2004). “Access to Finance for SMEs: Problems and Remedies.”

Government of Bangladesh (GoB) (2007). “Policy Strategies for Development of Small and Medium Enterprises”.

Giesen and Lincing (2006). “Enterprise Structure in Bangladesh”

Rahman, A. (2009). Atiur Sees Factoring as Ideal Financial Solution for SMEs, the Financial Express, July 26, Dhaka.

World Bank, "Industrial Strategy Study: A Nationwide Industrial Survey," 1993-94.

Asian Development Bank, 2009, Bangladesh Financial Sector: An Agenda for Further Reforms, Manila

Giesen and Lincing, 2006, Enterprise Structure in Bangladesh

MIDAS, 2009, Women Entrepreneurs in SMEs: Bangladesh

Human Resource Audit in Banks: Concept, Status and Readiness-Bangladesh Perspective**Md Masudul Haque**

Md. Masusul Haque[1]

Abstract

Human Resource (HR) Audit is a mean by which an organization can measure where it currently stands and determine what it has to accomplish to improve its human resources function. The basic goal of an HR audit is to find out the HR interventions that will enhance the firm's competitive advantage. It also ensures the compliance of the HR department with the goals, plan and policies of the organization. HR audit helps to determine not only the efficiency of the HR policies and practices but also to reduce their cost to the organization. The study aims to identify the current status and the readiness of banks regarding introduction of HR audit in the banking sector of Bangladesh. The study concludes that HR audit can be introduced in the banking sector of Bangladesh for effective formulation of banks' HR strategies and to achieve superior use of HR.

Key Words: Human Resource Audit, Human Resource Management, Human Resource Information System, Job Analysis, Performance Appraisal

1. Introduction:

Human Resource Management (HRM) has evolved over the years as a strategic partner in organizational success. As the HR functions have undergone a paradigmatic shift, graduating from administrative managers to strategic consultants, the transition has been quite challenging for many practitioners (Laabs, 1997). The changing nature demands the HR professionals to participate and contribute fully to their companies as true strategic business partners. In today's competitive climate, companies operate within the confines of a heavily-regulated employee environment. The scope of the HR function includes establishing and administering a host of policies and practices —many of which involve compliance implications- that significantly influence the productivity and profitability of the enterprise. Sometimes HR department are not sure whether they are doing everything they should be doing so as to perform at the highest possible level to provide effective delivery. (Amy, 2010)

Human Resource Audit is a process of examining policies, procedures, documentation, systems, and practices with respect to an organization's HR functions. The purpose of the audit is to reveal the strengths and weaknesses in the organization's HR, and issues that need resolution.HR Audit means the systematic verification of job analysis and design,

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recruitment and selection, orientation and placement, Training and Development (T&D), Performance Appraisal(PA) and job evaluation, employee and executive remuneration, motivation and morale, participative management, communication, welfare and social security, safety and health and disputes and their resolution. HR audit is very much useful to achieve the organizational goal and is also a vital tool which helps to assess the effectiveness of HR functions of an organization.

HR audit "is a tool for evaluating the personnel activities of an organization. The audit may include one division or an entire company" (K. Aswathappa, 2006). It gives feedback about the HR functions to operating managers and HR specialists. It also provides feedback about how well managers are meeting their HR duties. In short, the audit is an overall quality control check on HR activities in a division or company and an evaluation of how these activities support the organization's strategy

The HR Audit can be considered as a type of functional audit. Thus, as a first approach, one could say that HR auditing consists of diagnosing, analyzing, evaluating, and assessing future course of action within the framework of Human Resource Management (HRM). HR auditing is a basic tool for the management of a company. Its objective is not only the control and quantification of results, but also the adoption of a wider perspective that will aid in defining future lines of action in the HRM field. Thus, HR auditing must perform two basic functions. First, it must be a management information system whose feedback provides information about the situation in order to facilitate the development of managing processes or the development of HR. Secondly, it must be a way of controlling and evaluating the policies that are being applied, as well as the established processes. Thus HR audit analyzes the current and future scenario of HR incorporating Human Resource Information System (HRIS). Correspondingly HR audit incorporates some important issues of employees, such as, employee health and safety, employee relations, benefits and compensations etc.

However, a bank should consider some comprehensive employee related issues in HR audit such as recordkeeping, recruitment, performance appraisal, training and development etc. Bank's strategy should be at the middle when deciding issues of HR audit and then a bank should consider its HR strategy. In every issue, HR audit team will collect detailed information on such issues for example, as employee health and safety issue, employees working condition, work load, health hygiene, and safety in the work place etc. If HR audit team finds some inconsistency at the workplace, then the audit team is supposed to bring these issues to the attention of the management for corrective measures.

Organizations that periodically review their HR practices may create stronger and more effective relationships with their employees and achieve better business results.

Figure 1: Issues in HR Audit.

Source: Developed by the author.

Conducting an HR audit creates visibility and promotes alignment to the organization's strategic plan. It provides various benefits to the organization. Some of these are as follows.

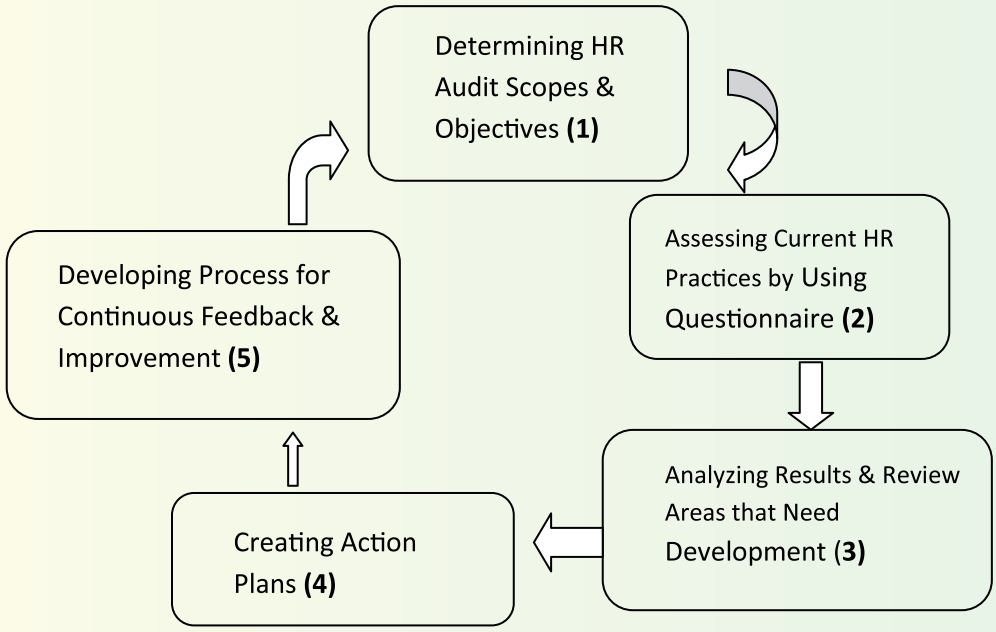
- It helps to find out the proper contribution of the HR department towards the organization.
- Development of the professional image of the HR department.
- Motivation of the HR personnel.
- Find out the HR problems and solve them smoothly.
- Provides timely legal requirement.
- Sound Performance Appraisal Systems.
- Systematic job analysis and Smooth adoption of the changing mindset.

Despite significant benefits of HR audit, still commercial banks of Bangladesh are not practicing HR audit to any significant extent. However, bank management now feels that effective employee participation and their efficient use in the organizational activities are essential for the success of the organization. Thus HR audit can play a vital role in achieving the benefits of HR audit.

The HR audit process may consist of five steps. At the initial stage, a bank has to decide the HR audit scopes and its objectives. Depending on the size of the bank, the auditor may be an individual or a group. An ideal audit team might consist of managers and supervisors from across the organization, representing diverse levels and functions. After determining

the HR audit objectives and scope, the HR audit team will collect data about the current HR practices and policies throughout the organization using questionnaire.

Figure 2: HR Audit Process



Source: Developed by the author.

After assessing current the HR practices, the HR audit team will review the HR audit results and they will develop a list of important issues for discussion with management for making effective use of the HR audit information. This should be done as soon as possible after the completion of the audit.

At the fourth stage, HR audit team will develop and implementation action plans with management. This step ensures that issues raised by the audit team are broadly discussed and understood by management and managers will accept responsibility for implementing indicated change. Managers participating in this step should be selected on the basis of the nature and scope of the issues identified by the audit.

Finally, the auditors or team transfers the responsibility of the results of the audit to the management. However, depending on the implementation plan, the auditor or team may maintain responsibility for follow-up to oversee the progress of implemation. Documentation is also required for follow-up of HR audit or as a roadmap for a future HR audit.

2. Literature Review

The term human resource auditing borrows its title and rationale from accountancy, and also makes use of the system, methods and information. Human Resources Audit can be defined as "a systematic assessment of the strengths, limitations, and developmental needs of its existing human resources in the context of organizational performance" (Flamholtz, 1987). Human Resources Audit, "measures human resource outputs and effectiveness under the given circumstances and the degree of utilization of human resource outputs and effectiveness under the given circumstances and the degree of utilization of the human resources in the best possible manner conducive to the organization" (Abdul Aziz Arain, 2001).

The audit of human assets is analytical rather than prescriptive. It aims, "to encourage professional managers and executives to develop their own ways of measuring performance against targets and objective developed from the experience and needs of their own particular unit, department and section. Executives be encouraged to revise, adapt and apply the various diagnostic methods which are best suited to their own circumstances" (Willion B. Werther & Keith Davis, 1996).

The human resources audit may act as a catalyst for departmental and Organizational Development

(OD) (Igalens, J. 2000). More precisely, it is a fast and simple procedure (Aswathappa, 2006). On the other hand, it is the auditor's responsibility to determine the extent to which performance may be

detailed and defined. The audit ensures the management of human resources within the company, the internal control system and conformity with the legislation (Marin, 2011).

HR audit must perform two basic functions. First, it must be a management information system whose feedback provides information about the situation in order to facilitate the development of managing processes or the development of HR. On the other hand, it must be a way of controlling and evaluating the policies that are being applied, as well as the established processes. The results can be valued through their cost (Walker, 1999).The things that get measured get managed (Kaplan & Norton 2008). HR Audit is very much helpful to face the challenges and to increase the potentiality of the HR personnel in the organization. It involves a company's strategic actions to take an intensely objective look at its HR policies, procedures and practices.

Due to expansions and competition in the business, the management may in particular intend to reduce the cost without deteriorating quality, which is possible by eliminating waste, avoiding breakdowns, bottlenecks and by utilizing fully the human resources, along with other factors of production, for which human resource audit can be a useful tool and assistance for better and improved management controls. It is an independent appraisal

study of various management levels to ensure the fulfillment of the organizational objectives, policies, and procedures. Human resource audit in its scope is beyond the conventional audit. The human resource audit is more clearly defined as "a method to evaluate the efficiency of human resource at all levels throughout the organization, in order to ascertain whether sound management prevails throughout, and to recommend its effectiveness where such is not the case" (Willion B. Werther & Keith Davis, 1996).

The HR manager himself or herself is interested in knowing his or her department's effectiveness. It is not that the department is dependable. Errors do happen. Policies and practices become outdated. By auditing itself, the department finds problems before they become serious. Done correctly, the evaluation process can build a strong rapport between the department and operating managers, and it can reveal outdated assumptions that can be changed to meet the department's objectives and future challenges (T.V. Rao & Udai Pareek, 1997). Systematic assessment instills discipline in the personnel staff and encourages them to move away from intuitive techniques to more rigorous assessment of the likely benefits to be achieved. Further, "a personnel function must establish credibility with the management by justifying its programs and clearly demonstrating how it contributed to the attainment of organizational goals" (Pareek, 1997).

T.V.Rao (1999), reported that HR audit is a great deal of work as been in India regarding the use of HR as an organization development intervention and is a unique feature of Indian organizations. HR audit has following result. The audit in several organization resulted in established several original system and process, such as potential and performance appraisal, career planning, training, monitoring. Formulation of clear cut polices including promotion policy communication policy reward and reorganization policy, etc. Helps in development trust, collaboration and teamwork. Human orientation gets injected into business process with opportunities for growth and development provided to all employees in team of their work leading to higher level of role efficacy. Audit should also analyze if the personnel policies are in alignment with the general objectives and the global strategy of the company. It must also translate the HR strategy into plans and programs. Thus appears a new element of the audit of HR, the strategic audit. Schuler (1999), defines it as "the evaluation of the adaptation of the HR policies and practices in their support of the company's general strategy."

HR audit has been practiced by different types of organizations such as bank, multinational companies, universities, corporate houses etc. In the banking sector, human resource audit is gaining popularity. Managerial attention at the bank has therefore been focused on the need to continually invest in people, provide them with the right incentives to perform better for professional and career development. The Reserve Bank of India (RBI) has embarked on its biggest ever human resource audit programme to take a complete re-look at its man management practices. The central bank is facing challenges on the manpower front from various directions such as retirement and skill up gradation. State Bank of India

(SBI) has become 'Employer of choice' by undertaking human resource audit.

In Bangladesh commercial banks are trying to develop and sustain a work environment in which employee is empowered, is provided with opportunities for professional growth and is recognized and rewarded for the contribution towards achievement organizational objectives.

3. Objectives of the Study

Considering the above background, the study is an attempt to see the present status of Human Resource Audit in the banking sector of Bangladesh. Moreover, the study also tries to identify the readiness of banks to introduce Human Resource Audit and finally to recommend some suggestions regarding HR audit in banks.

4. Methodology of the Study

Both primary and secondary data have been collected for the study. Primary data have been obtained through a sample survey. The respondents were from different commercial banks in Bangladesh including central bank. The design of the questionnaire (Annexure 1) involved a combination of both open and close- ended questionnaires. A total number of 106 bank officials of Human Resource Division (HRD) from 23 banks have been interviewed. Banks were selected based on stratified sampling techniques. The author interviewed bank officials of twenty two commercial banks, covering 3 Newly Corporatized Bank(NCB), 13 Private Commercial Bank(PCB), 4 Islamic Bank (IB), 2 Foreign Commercial Bank (FCB) and Bangladesh Bank(BB). For theoretical framework of the study, relevant articles, journals, text books and research work were consulted.

The data was analyzed by applying statistical formulae which are graphically presented through charts, figures and image etc. The study suffers from some limitations such as sample size, and narrow scope. However, the study suggests in-depth study on this issue in future taking large sample size with wide scope.

5. Analysis and Findings

In order to know the current status of HR audit and the readiness of banks the study conducted a primary survey and some important findings are given below:

5.1 Current Status of HR Audit in Banks: The study tries to identify whether bank officials are familiar with HR audit concept and whether HR audit is beneficial for the banks. The study finds that 82% bank officials working in the HR division are familiar with the concept of HR audit and 95% bank officials believe that HR audit is beneficial for banks. This indicates that bank officials of Bangladesh are quite familiar with HR audit concepts and its potential benefits for the banks.

Figure 3: Response of the Bank Officials About the Familiarity with HR Audit.

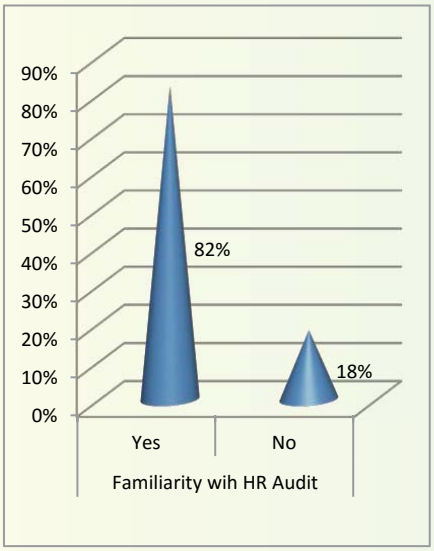
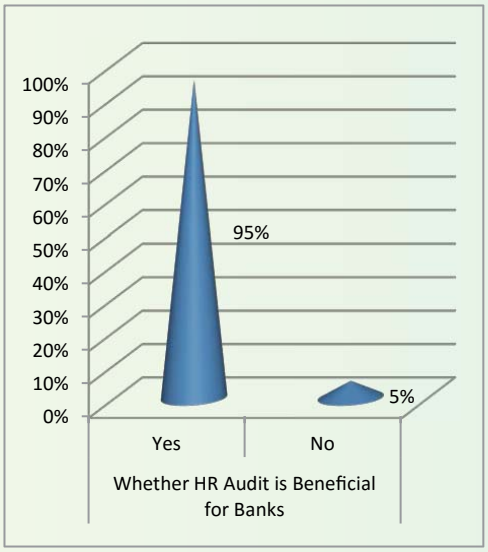


Figure 4: Response of the Bank Officials About the Benefits of HR Audit.



Source: Survey Data

The study tried to identify whether HR audit should be introduced by the banks and whether banks of Bangladesh conduct HR audit. Survey finds that 94% bank officials believe that HR audit should be introduced by their respective banks and 70% commercial banks of Bangladesh do not conduct HR audit. Thus there is a great scope to introduce HR audit in the banking sector of Bangladesh.

Figure 5: Response of the Bank officials About Introduction of HR Audit in Banks

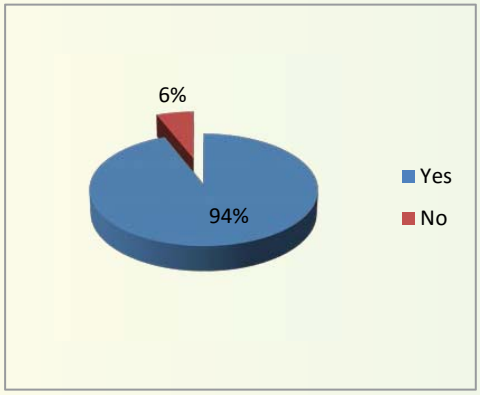
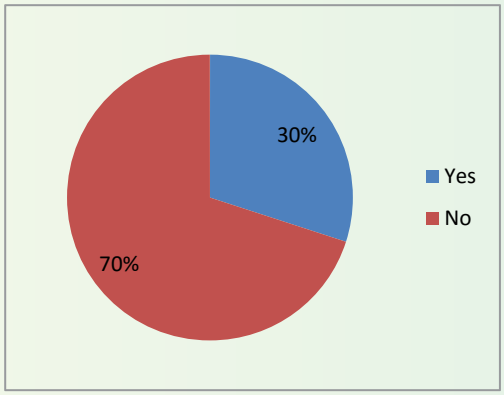


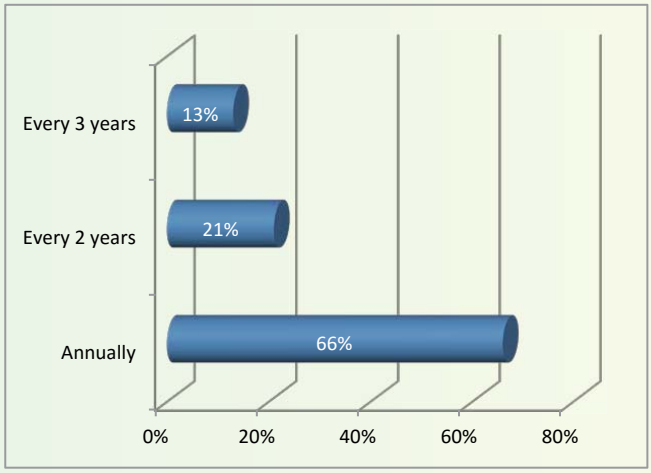
Figure 6: Whether Banks of Bangladesh Conduct HR Audit?



Source: Survey Data

The study finds that 30% banks have already introduced HR audit in their banks, so the study also tried to know how often a bank conducts HR audit. It has been found that 66% banks conduct HR audit annually, 21% banks conduct HR audit after every 2 years and 13% banks conduct HR audit after every 3 years.

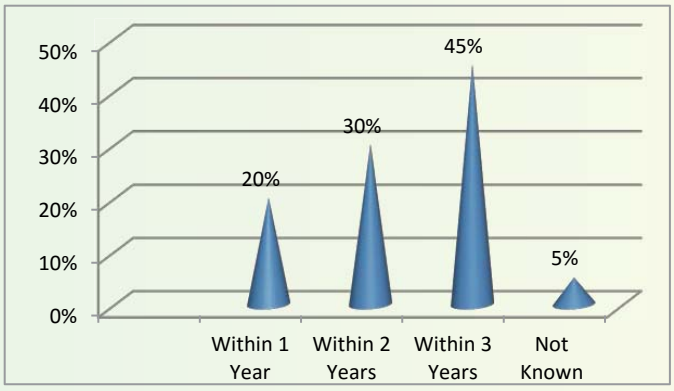
Figure 7: How often does a bank conduct HR audit?



Source: Survey Data.

Within how many years banks will introduce HR audit? In reply to this question the study finds that 20% banks will introduce HR audit within 1 year, 30 banks will introduce HR audit within 2 years, 45% banks will introduce HR audit within 3 years and 5% banks do not know their time frame. Therefore the study finds that a noteworthy number of bank have plan to introduce HR audit within few years which is a positive sign for the commercial banks of Bangladesh.

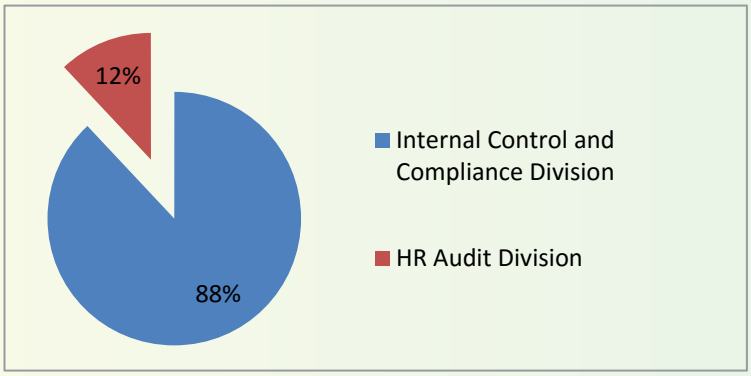
Figure 8: Within How Many Years Banks will Introduce HR Audit.



Source: Survey Data

It has been observed in the study that 30% banks of Bangladesh conducts HR audit. Hence, the study also tries to find out which department conducts HR audit in banks. In the study 88% bank officials report that HR audit is conducted by the Internal Control and Compliance Division and 12% bank officials report that HR audit is conducted by the HR Audit Department. A significant number of banks conduct HR audit through their Internal Control and Compliance Division (ICCD). From here we can get the message that banks do not conduct HR audit in a professional manner. As HR audit is a new concept so it should be conducted by professional HR audit experts.

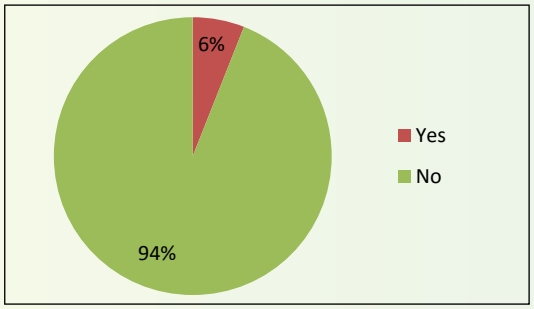
Figure 9: Department Conducting HR Audit



Source: Survey Data

As to whether banks take assistance from other organization to conduct HR audit, 94% bank officials replied that, their banks do not take any assistance from other organization to conduct HR audit and only 6% banks take assistance from third part to conduct HR audit. From this we can assume that banks are trying to conduct HR audit internally. Nevertheless, to conduct HR audit initially banks can take assistance from professional organizations.

Figure 10: Assistance from other Organization to Conduct HR Audit



Source: Survey Data

5.2 Qualifications of the HR Auditors: HR audit should be conducted by professional HR auditors to get the real benefits of HR audit. However, the study finds that most of the cases HR audit is conducted by the Internal Control and Compliance Division of banks. Keeping that in mind the study also included an open ended question, namely in your opinion, what should be the qualification(s) of HR auditors? Reply received from the bank officials against this question are summarized below.

I. HR auditors should have specialized knowledge of HR.

II. HR auditors should be certified HR professional.

III. Having Masters in Business Administration (MBA) with major in HR.

IV. Chartered Accountant (CA) with HR certification such as Post Graduate Diploma (PGD) in HRM.

V. HR auditors should have sound Knowledge about Human Resource Information System.

VI. Auditors having sound knowledge about HR policy, guidelines, HR planning, labor law, income tax etc.

5.3 Suggestions Regarding Introduction of HR Audit in Banks: The study sought suggestions from the bank officials about introduction of HR audit in their banks. Some of the suggestions are given below.

I. Proper monitoring is needed for HR audit i.e. banks must ensure that HR audit team will perform their job with professional care and in a responsible manner.

II. HR audit should be started from the root level at least annually. All bank officials human resource related activities from branches to head office should be audited.

III. HR department should play a proactive role about the findings of the HR audit i.e. HRD should take prompt decisions based on the recommendations of the HR audit team.

IV. Initially, HR audit may be outsourced to professional organizations, as banks of our country are not completely ready to introduce HR audit.

V. Bangladesh Bank may compel banks to introduce HR audit as some banks are not eager to introduce HR audit.

VI. Proper training is needed for the HR audit team members as well as for the management of banks for better understanding about the concept and possible benefits of HR audit.

VII. Strong employee database is required to introduce HR audit in banks, as HR audit is linked with the employee database.

VIII. Every bank should have a sound policy about HR audit.

5.4 Challenges of HR Audit: So far in the banking sector Bangladesh, HR audit is not that much practiced, a few banks have started HR audit with the help of the Internal Control and Compliance Division of banks. HR audit can be structured to be either comprehensive or specifically focused, within the constraints of time, budgets and staff. The study also identified some challenges with the response of the bank officials. Some of the challenges of HR audit are given below.

I. **Lack of knowledge about HR audit concept**: As HR audit is a new concept in Bangladesh, so lack of clear idea about HR audit is one of the major challenges to introduce it in the banking sector of Bangladesh.Howover bank officials, board members and other stake holders should have a sound idea about HR audit.

II. **Disinformation about HR audit**: In case of introduction of HR audit in banks sometimes there is chance to spread out rumor that employees may lose their job after HR audit or new policy may be taken based on the findings of the HR audit. In that case employees should be convinced that findings of the HR audit will be used for the betterment of the employees.

III. **Cost involvement**: Introduction of HR audit will increase the cost of the banks, especially for the large banks having many branches and manpower. However, banks should consider the possible benefits of HR audit against the cost.

IV. **Lack of efficient manpower in HR audit team:** Shortage of efficient manpower is another significant challenge of HR audit. Usually audit team members do not have HR background, so banks should develop manpower for HR audit team. Initially HR audit team members may need training from abroad to gain expertise in this area.

V. **Auditors may be biased:** If vital decisions are taken based on the findings of the HR audit, in that case HR auditors may be biased. So HR auditors should act diligently with professional care. Cross checking may be needed in some vital areas of HR audit.

VI. **Lack of Human Resource Information System (HRIS):** HR audit needs support from information technology. HR audit is linked with human resource information system. Human Resources Information refers to the systems and processes at the intersection between human resource management (HRM) and information technology. But many commercial banks of Bangladesh do not have efficient HR database. Therefore, banks should develop complete HR database initially to introduce HR audit in banks.

VII. **Change management:** Change is a constant in today's workplace. Skill as an employee or manager will be assessed by how well managers handle change management in their organization. Accordingly, introduction of HR audit will also bring some changes in the organization so change management is also considered as one of the major challenges in introducing HR audit in Banks.

6. Conclusion of the Study

Human resource is an integral part of any organization. A well-run and well managed HR department can increase employee morale, reduce employee turnover and help a business run smoothly and in many cases remain competitive. Employees should be seen as the most valued asset of a company and treated accordingly. Because of this, to make sure an HR department is operating to its best capacity, it is important to run a periodic HR audit. An HR audit can be done through self-assessment, internally, or can be done by hiring a professional audit company. An HR audit report will pinpoint where there are weaknesses or risks in the HR department and help to address these. To introduce HR audit in the banking sector of Bangladesh, it is recommended that every bank should have a sound policy guideline on HR audit. Bangladesh Bank can also play a significant role in this issue. The results of the study may be helpful to introduce HR audit in the banking sector of Bangladesh. Finally, it can be said that commercial banks of Bangladesh have ample scope to work in this area.

References

Abdul, A. A. (2001), "Human Assets Accounting and Human Resource Audit". *Pakistan & Gulf Economist*, Issue 1&2.

Amy, L. (2010), Improving your Organization with the Integrity HR Audit, Retrieved from, http://www.youtube.com

Aswathappa, K. (2006), *Human Resource Management and Personnel Management*, (4th Ed.). McGraw-Hill.

Boudreau, J. W., & Ramstad, P. M. (1997), "Measuring Intellectual Capital: Learning from Financial History", *Journal of Human Resource Management*, 36(3), 343-356.

Flamholtz, E. G., Bullen, M. L., & Hua, W. (1987), "Future Directions of Human Resource Management", Monograph & Research Series (Univ of California Inst of Industrial Relations).

Igalens, J. (2000), *Audit des Resources Humaines*, Paris: Editions Liaisons

Laabs, J. J. (1997), Stay a Step Ahead with 5 Key Skills Workforce, Journal of Organizational Culture, Communications and Conflict , Vol. 10, No. 1 , January (10), 56-65

Kaplan, R. S., Norton, D. P. (2008). *Execution Premium*. Harvard Business Press

Marin, I. (2011), Auditul Resurselor Umane, Bucharest: Editura Economica

Makhamreh, M. A. (1985), "Determinants of Absenteeism and Turnover Rates in Jordan Business Firms", *Journal of Jordan University*, 12(5), 27-34.

Pareek, U., & Rao, T. V. (1992), *Designing and Managing Human Resource Systems*, New Delhi,

(2nd ed), Oxford & IBH, .412.

Pareek, U. (1997), "Evaluation of HRD Functions" (A brief note in evaluating human resource development). Jaipur:HRD Research Foundation. 3-10.

Rao, T.V, (1999), *HRD Audit*, New Delhi: Sage

Rao, T. V., & Pareek, U. (1997), *Human Resource Management*, (2nd ed.). Academy of Human Resource Development.

Schuler, R.S., (1999), "Personnel and Human Resource Management: Choices and Organization Strategy", C**a**nadian Readings in Personnel and Human Resource Management, St. Paul, MN: West, 3-26

Walker, J.W., (1999), *Human Resource Strategy*, New York: McGraw Hill

William.B. and Keith Davis (1996), *Human Resource Management and Personnel Management*, 5th edition, McGraw-Hill. www.rbi.com, www.sbi.com

Annexure 1

Human Resource Audit in Banks: Status and Readiness of Banks

Questionnaire

Name of the Respondents:

Name of the Bank:

1. Are you familiar with the term Human Resource Audit in Banks?

☐ Yes ☐ No

2. Do you think Human Resource Audit is beneficial for the banks?

☐ Yes ☐ No

3. Do you think Human Resource Audit should be introduced by your bank?

☐ Yes ☐ No

4. Does your bank conduct Human Resource Audit?

☐ Yes ☐ No

4.1 If yes, please mention, how often your bank conducts Human Resource Audit?

☐ Annually ☐ Every 2 Years ☐ Every 3 Years ☐ Others

4.2 If No, Does your bank have any plan to introduce Human Resource Audit?

☐ Yes ☐ No

4.2.1 If Yes When? ----------

5. Please name the department of your bank conducts Human Resource Audit.

6. Does your bank take any assistance from other organization to conduct HR audit?

☐ Yes ☐ No

6.1 If yes, please mention, the name of the organization(s).

7. In your opinion, what should the qualification(s) of HR auditors?

8. In your opinion, what are the problems or challenges banks may face in introducing HR audit in our banking industry?

_____

_____

_____

9. Do you have any suggestions regarding introduction of Human Resource audit in the banking sector of Bangladesh.

_____

_____

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Introduction to Bangladesh Bank Training Academy (BBTA)

Bangladesh Bank Training Academy (BBTA) is a training wing of central bank of Bangladesh, Bangladesh Bank pursues tasks of capacity building and human capital development in order to prepare skilled human resources in central bank as well as for commercial banks. BBTA organizes different training courses, training workshops, conferences, seminars and other related activities on main topics of economics, banking and finance, financial sector development, human resources development and macroeconomic management. It was established in 1977.

BBTA's Mandate

The purpose of the Academy is to undertake training activities for enabling the officials of central bank and the banking sector to perform their jobs efficiently well-equipped with the latest knowledge of economic, financial and banking developments. To this end, BBTA extends its all-out efforts to facilitate training to personnel engaged in the financial sector. It also works to modernize its library and information center to collect, systematize and disseminate information in the financial arena. Recently, a plan has been adapted to reorganize BBTA library as a Knowledge Management Centre (KMC). This new role puts more weight on BBTA for knowledge creation and application. Since information is important to create new knowledge for educating staff and professionals, we hope that it would contribute to the creation of knowledge and disseminate knowledge for use by others.

BBTA's Strategic Objectives

Bangladesh Bank has adopted its 5-year Strategic Plan 2015-2019 and bestowed responsibilities upon BBTA (Strategic Goal # 8) to adopt all-out efforts to enhance professional excellence and grooming of the officers of Bangladesh Bank. To fulfill the target of the plan document, BBTA has been employing its full capacity to providing need-based training to the officials both from central bank and commercial banks; continuously striving to diversify the contents of its courses in order to ensure their consistency with evolving training needs; facilitating the practical application aspects of knowledge of economics, banking and finance; and developing training as a scientific discipline.

In order to achieve the above mentioned strategic objectives, BBTA has introduced the following initiatives.

1. Building and enhancing training capacities of the trainers;
2. Improving quality, efficiency, impact and cost-effectiveness of training programs;
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4. Building training partnership programs with the public and private sector domestic and overseas training institutions;
5. Building and maintaining the BBTA financial institutions information system,
6. Utilization of the Internet for dissemination of the Academy's biannual Journal 'Thoughts on Banking and Finance';
7. Building a database on trainers and training institutions in the field of banking and finance; as well as
8. Facilitating the digitization of BBTA documents.

Organization

The Principal is the head of the Academy. There are nine wings to look after the administration, training and research programs of the Academy.

Location

The Academy is located in Mirpur-2, Dhaka-1216, Bangladesh.

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