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Editorial Notes

On the eve of bringing out the second issue of *Janata Bank Journal of Money, Finance and Development*, I am delighted to point out here that a number of innovative, thought-provoking papers have been incorporated in this publication and to my belief it again, like the first issue, will be counted as a precious addition in the realm of research-based financial journal. Some of the articles contributed by the seasoned academicians and even by the younger thinkers certainly have merits to call our attention for sincere consideration.

We have sorted out sixteen from a range of articles for this issue and we are much encouraged having received contributions from academicians and development thinkers across the country. This has been unlike the case of our first issue that attracted articles mostly from Dhaka city. We hope to widen our horizon further and take the journal across the national level and attract papers from academicians, thinkers, researchers and professionals around the world in near future.

We gratefully thank all the contributors, personnel involved with its management and publication, and finally we thank Janata Bank Limited for its noble endeavour in publishing such research-based journal which in all counts will enlighten our thoughts and reshape our way of doings in newer lights of development thinking.

Shaikh Md. Wahid-uz-Zaman
Editor, *Janata Bank Journal of Money, Finance and Development*, and
Chairman, Board of Directors, Janata Bank Limited.

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Towards a Pro-poor Fiscal Policy

Mirza Azizul Islam*

Abstract Despite laudable progress, Bangladesh faces stupendous challenge in reducing poverty. Fiscal policy can play an important role in this regard. For fiscal policy to become a more effective tool government revenues have to be increased by enhancing the contribution of income and profit taxes. There is a scope for reducing the rate of value added tax while increasing the coverage of application of the standard rate. Import duties should be restructured so as to encourage domestic production of intermediate goods and diversification of export goods. Government expenditure should go up with increased allocation to education, health and social safety net while ensuring that the components of these expenditures are effectively directed towards reducing poverty.

Keywords Pro-poor Fiscal Policy, Level and Structure of Government Revenues, Level and Distribution of Government Expenditure.

1. Introduction

Bangladesh is often lauded by the international community for its remarkable success in reducing poverty. Measured by national poverty line, the incidence of poverty (defined as the proportion of population below the poverty line) declined from 58.8 per cent in 1990 to 31.5 per cent in 2010. Projecting the rate of decline in recent years, it is estimated that the present level of incidence of poverty is about 25 per cent. Laudable progress notwithstanding, the country faces a stupendous challenge. The number of poor people in Bangladesh would be nearly twice as many as the entire population of Sri Lanka. This article seeks to explore how fiscal policy can be made more pro-poor with a view to accelerating poverty reduction.

Fiscal policy comprises several elements of government policies. Those are revenue collection, expenditure and methods of financing deficit. The levels as well as the structures of these elements need to be

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analyzed to draw conclusions regarding the potential scope for use of fiscal policy as an instrument of poverty reduction. The focus of this paper is on government revenues and expenditure.

2. Government Revenues

2.1 Level of Revenue

It is widely held that expenditure side of fiscal policy can play more effective role in promoting equitable growth (hence by extension in reducing destitution and poverty) than revenue/taxes (Asian development Bank, 2014 and Stern, 1997). This, of course, does not imply that there is no role of the revenue side. The reasons are that (i) a higher level of revenue generates financial resources that the government can deploy for the benefit of the poor (ii) at any given level of revenues; there may be a scope for restructuring such that the poor have to bear less burden.

As regards the level, Bangladesh has the dubious distinction in the country's revenue/GDP ratio which is one of the lowest in the world and the lowest among 13 Asian countries (Appendix Table 1).

In Bangladesh, tax revenues account for about 80 per cent of total revenues. Therefore, the country's performance in raising taxes merits some examination. A country's ability to raise taxes depends on many factors: level of income, structure of the economy, competence and integrity of the administrative machinery responsible for collection of taxes, effectiveness of the legal system and so on. A recent study by UNESCAP has estimated the tax potential of different Asian countries taking into account the level of per capita income and the structure of the respective economies (UNESCAP, 2014). The structural factors considered were the share of agriculture in GDP and openness to international trade. The higher the share of agriculture in GDP, the lower is likely to be the tax revenue collection. The reasons are that workers in the agricultural sector usually have lower incomes, their wages generally paid in cash are not properly recorded and many agricultural products are exempted from tax. On the other hand, the greater the openness of an economy to international trade, the larger is likely to be tax revenue as it is relatively easy to collect international trade-related taxes.

Taking into account the level of per capita income and the aforementioned structural factors, UNESCAP study has estimated the tax potential and tax gap, defined as the difference between the potential and the actual tax revenues as proportion of GDP (Appendix Table 2).

It will be seen that Bangladesh has the highest tax gap implying that our effort to collect taxes is the weakest among the eight countries listed in the table. There is, therefore, a strong case for enhancing tax revenue collection. More will be said on this point in the analysis of tax structure.

2.2 Structure of Revenues

2.2.1 Income and Profit Taxes

An important change in the structure of revenues of the government of Bangladesh is the rising importance of income and profit taxes (Appendix Table 3). These taxes, of course, do not directly affect the poor as their incomes would be below the exemption limit of personal income taxes and they are most unlikely to be subject to profit/dividend taxes. However, the contribution that these taxes can make towards making fiscal policy more pro-poor is through raising more revenue that can be deployed for poverty-reducing expenditure.

From the perspective of increasing revenue contribution of income and profit taxes, the government should pay attention to the following:

- Broaden the tax base. As of now the number of people who submit income tax returns falls considerably short of TIN (Tax Identification Number) holders. There also exists considerable scope foe expanding the territorial coverage of income tax collection. There are many residents of semi-urban and rural areas whose income levels are well above the prevailing exemption limit, but they remain outside the tax net.
- Ensure uniformity of tax treatment for various categories of tax payers, specially in the area of profit taxes. At the moment some categories of business pay very high and differentiated rates of taxes (e.g. banks, insurance companies, non-bank financial institutions, unlisted companies) while others pay considerably lower rates of taxes.
- The regime of tax concessions in the form of exemptions, tax holidays, accelerated depreciation allowances and rebates should be reviewed and rationalized. There are reasons to believe that most of these do not serve the intended objectives, but lead to considerable erosion of revenues.

2.2.2 Value Added Tax (VAT)

Value added tax has emerged as the single most important contributor to revenues. There is a legitimate concern that these taxes are essentially regressive and even the poor may have to bear some burden of this tax in so far as it is imposed on some items of their consumption.

Based on the recommendations of International Monetary Fund the Government has approved a new VAT law. However, it is yet to be made effective. At any rate, it would be desirable to undertake a study of whether the application of VAT might affect poor households and if so, how the adverse effect could be removed.

In administering the new law, attention should be paid to extension of the coverage of standard tax rate. If this is done, there would be a case for reducing the standard rate from the present 15 per cent which is higher than corresponding rates in India, Indonesia, Malaysia and Singapore (UNESCAP, 2014).

2.2.3 Import Duty and Supplementary Duty

The basic rates of import duty have been rendered meaningless in many instances through the introduction of supplementary duty, regulatory duties and other levies. In consequence, the system has become complex. The progressive reduction of duties on raw materials, intermediate goods and capital machinery militates against domestic production of these categories of goods. A large measure of dispersion among rates provides an incentive for mis-declaration to avoid tax liability and for undesirable negotiation between tax payers and tax officials. Effective rates of protection for domestic production of low-end finished products have become high and widely divergent. This has most likely caused considerable distortion in resource allocation and promoted inefficiency. The choice of the level of protection is often dictated by special interest groups. Time has come for Bangladesh to focus on broad-based protection through less differentiated, if not entirely uniform, tariff. “Broad-based protection reduces the scope for special interest” (sliglitz, 2006, p.72).

It may be mentioned here that reforms in import tariff regime in Bangladesh were preceded by a fairly comprehensive study on trade and industrial policy in the early 1980s. It is high time for a similar study to determine the levels and dispersion of effective rates of protection/ subsidy across activities as a basis for revamping the import duty structure. Such a study should also examine the incidence of the duty structure on the consumption goods of the poor households. There is also the possibility that the present structure militates against the emergence of new labour-intensive exports which could potentially create more employment opportunities and thereby reduce poverty.

In this context, some of the key findings of a World Bank study (World Bank, 2007) are recapitulated here:

- A pattern of increasing reliance on para tariffs for both protection and revenue purposes has emerged over the last decade to the detriment of trade openness.
- There is a significant tariff escalation in the import duty structure, with import duties rising according to the stages of processing.

Because of a plethora of end-user specific duty concessions, domestic production of certain products such as intermediate goods and components has been discouraged.

- Anti-export bias measured as the ratio of effective exchange rate for imports to that of exports remains high, though certain activities, notably readymade garments, have been insulated. The bias should be eliminated to diversify the basket of export goods.

To remedy the above deficiencies, the Government needs to, *inter alia*,

- Unify all para-tariffs and merge them with import duty.
- Eliminate all end-user tariff exemptions/concessions.
- Discontinue protective use of VAT by ensuring that it is levied both on domestic production and imports of the same product or close substitutes.
- Ensure a well-functioning duty drawback system. This could help eliminate anti-export bias and encourage labour-intensive exports and thereby greater employment of the poor.

2.2.4 Non-NBR Taxes and Other Sources of Revenue

The Government needs to adjust non-NBR taxes such as land revenue and stamp duty; various fees and charges for services provided by Government and improve the efficiency of state-owned enterprises so as to increase their profit/dividend contribution to the treasury. These actions are needed to enhance revenue collection and reduce explicit or implicit subsidies.

3. Government Expenditure

3.1 Level of Expenditure

A combination of weak revenue performance and limited budget deficit, by choice or default, has led to low level of public expenditure. Here again, Bangladesh has the unenviable distinction of having the second lowest proportion of GDP among comparator Asian countries (Appendix Table 1). At the same time, the need for enhancing public expenditure cannot be overemphasized in order to redress debilitating deficiency in infra-structure (power, energy, transportation etc.), provide for merit goods and services and others with strong positive externalities in favour of the poor (health, education, protection against climate change induced adverse consequences) and undertake expenditure which may directly alleviate poverty (agriculture, social safety net).

3.1.1 Distribution of Expenditure

Government expenditure in Bangladesh is divided into two broad categories: non-development expenditure (essentially current expenses of the Government) and development expenditure (roughly equivalent to capital expenditure or investment by the Government). The latter is mostly reflected in the Annual Development Programme (ADP). An undesirable feature of the Government expenditure pattern in Bangladesh has been the progressive increase of revenue expenditure, accompanied by falling development expenditure over time. To illustrate, revenue expenditure rose from 7.5 per cent of GDP in FY 99 to 10.0 per cent in FY 12 whereas expenditure on ADP fell from 5.6 per cent to 4.5 per cent over the same period (Ministry of Finance, 2014).

3.1.2 Non-development Expenditure

The economic analysis of non-development expenditure shows preponderance of three heads (i) pay and allowances, (ii) subsidies and current transfers including pensions and gratuities and (iii) interest payments. In FY 14, these heads accounted for nearly 75 per cent of entire non-development expenditure as per revised estimates. Actual subsidy payments are most likely larger because all subsidy payments are not explicitly shown in the budget. Block allocations meet part of these requirements. Losing enterprises/organizations also borrow firm state-owned banks, often with government guarantees.

Another unwelcoming trend is that as a consequence of ever rising non-development expenditure coupled with less than commensurate growth of domestic revenues, ADP financing has become increasingly dependent on borrowing both domestic and foreign leading to burgeoning interest payments, specially for domestic loan. These patterns of non-development expenditure are not particularly conducive to poverty alleviation.

3.1.3 Development Expenditure

As regards development expenditure, the priority sectors have remained virtually unchanged over the past many years. The relevant sectors are agriculture and water resources, rural development, energy and power, transport, education and health. These sectors typically account for 75% to 80% of ADP allocation, with minor year to year variations in inter-sectoral ordering. In light of the prevailing socio-economic conditions, these priorities seem to be more or less justified and have been maintained by successive governments.

The main problem with ADP relates to its implementation. It has become an established norm that revised ADP is lower than provided for in the original budget. And about 85 to 90 per cent of revised ADP is actually spent. Besides, a large portion of actual expenditure is hurriedly incurred in the last two months of the fiscal year, underming the quality of works.

Another problem is that all Governments seem to derive satisfaction from approving new projects. The inevitable consequence is that available resources are thinned out over too many projects and no project is completed as per time schedule laid down originally. As a result, intended beneficiaries of the projects are deprived of the benefits, projects suffer from cost overruns and cost-benefit analysis underlying the project becomes meaningless. Nevertheless, Ministries feel obligated to complete the projects once some expenditure is incurred on a project without talking any fresh look at the changes in costs and benefits resulting from delayed implementation.

3.1.4 Suggestions for Enhancing Pro-poor Impact of Expenditure

In light of the above diagnosis of public expenditure management, attention should be paid to the following (Islam, 2012):

- Overall, the Government should reduce non-development expenditure.
- The number of inessential, unproductive government employees should be reduced through attrition. Posts once created should not become permanent fixtures.
- There should be less reliance on domestic borrowing which imposes high interest cost on the budget.
- Subsidy regime needs to be overhauled, shifting progressively away from generalized subsidies for example on fertilizer, petroleum, electricity to targeted, means tested subsidies. This suggestion is also applicable, mutatismutandis, to transfer payments that fall in the category of social safety net.
- ADP should be implemented on time; the tendency to approve new projects and prolongs the duration of old projects should be reversed.
- All subsidies to state owned enterprises and corporations should be explicitly borne on the budget in the interest of transparency and progressively reduced and eliminated in the case of commercial and industrial enterprises.

Before concluding a few words are in order with respect to government expenditure on education, health and social protection. The reason is that “Education and health care directly improve the welfare of the poor even as these services augment their human capital and productive capacity. Social protection helps to protect individuals from the risks and uncertainties of life." (ADB, 2014, p. 45)

In Bangladesh, government expenditure on all these heads is low. As of 2010, the country's rank in terms of expenditure on education as percentage of GDP was fifth lowest among 27 Asia Pacific countries. In the area of health, the corresponding rank was seventh lowest among 37 Asia Pacific countries (ADB, 2014). As regards social safety net, budget allocation in FY 09 was 17.3 per cent of total budget amounting to 2.8 per cent of GDP (GoB, 2008). The allocation in FY 12 fell to 13.8 per cent of total budget amounting to 2.5 per cent of GDP (GoB, 2011). In order to make fiscal policy more pro-poor, it is essential that expenditure on education, health and social safety nets be substantially increased.

Apart from the level, the incidence of these expenditures has to be titled more sharply towards the poor. It has been observed that government spending on child care is progressive; the poorest quintile receives more than 20 per cent of spending. However, overall health expenditure is regressive. Similarly, government expenditure on primary education only is progressive, but regressive at all other levels (secondary, higher secondary and tertiary). The degree of anti-poor bias rises with the level of education (World Bank, 2015). The complaints about mis-targeting of the social safety net programmes are not infrequent. Leakages occur in the form of exclusion of those who are entitled to benefits, inclusion of those who are not entitled and some outright misappropriation as well.

4. Conclusion

This article has explored the scope for making fiscal policy of Bangladesh more pro-poor with a focus on government's revenue collection and expenditure. Towards this end the Government needs to pay attention to a number of issues. On the revenue side, these relate to extension of coverage of income, profit and value add taxes. Too many exemptions, rebates etc. should be eliminated. In that event the rates of taxes, particularly value added taxes, may be reduced while increasing revenues that can be used to benefit the poor. Import and supplementary duties should be restructured so as to eliminate the bias against domestic production of intermediate goods and against emergence of new labour-intensive exports. On the expenditure side, growth of non-development expenditure needs be restrained. Allocations for health, education and social safety nets should be increased and restructured to ensure that the resultant benefits accrue to the truly poor and are not appropriated by the relatively well-to-do people.

Appendix Table 1: Central Government Expenditure and Revenue

(% of GDP)

	Expenditure		Revenue	
	2012	2013	2012	2013
Bangladesh	16.6	16.9	12.5	12.4
Cambodia	21.6	19.9	15.2	14.9
China	24.3	24.6	22.6	22.7
India	28.1	28.4	20.9	22.0
Indonesia	18.1	18.0	16.3	15.7
Laos	25.6	30.5	17.7	18.1
Malaysia	26.5	25.6	22.1	21.7
Nepal	20.8	19.4	18.6	19.8
Pakistan	21.5	21.0	12.8	13.0
Philippines	16.8	16.3	14.5	14.9
Sri Lanka	20.5	19.7	14.1	13.8
Thailand	19.6	18.2	18.3	18.1
Vietnam	29.3	29.2	22.9	22.1

Source: Asian Development Bank, *Asian Development Outlook 2014*.

Appendix Table 2: Tax Potential and Tax Gap

(% of GDP)

	Year	Tax potential	Tax gap
Bangladesh	2013	18.0	7.5
Cambodia	2011	13.0	3.0
China	2012	21.2	1.8
Indonesia	2012	16.6	4.7
Malaysia	2012	17.4	1.3
Nepal	2013	16.1	0.9
Pakistan	2012	12.1	1.8
Thailand	2011	19.0	0.2

Source: UNESCAP, 2014, *Economic and Social Survey of Asia and Pacific*, 2014, Bangkok.

Appendix Table 3: Structure of Revenues

(Percentages of total revenues)

Major Items	FY 13	FY 08
NBR-administered taxes		
Income and Profit taxes	26.8	18.2
Value added tax	30.1	28.1
Import duty	9.9	15.4
Supplementary duty	12.7	13.2
Non-NBR taxes		
Vehicle taxes	0.6	0.8
Sale of tamps	2.1	1.9
Non-tax revenues		
Profit and dividend	3.7	4.1
Administrative fees	2.5	2.3

Source: Government of Bangladesh, Ministry of Finance, *Budget in brief* (various issues).

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Performance of Public Private Partnership Projects in Bangladesh

Shaikh Md. Wahid-uz-Zaman*

Abstract A formal PPP programme was declared in 2010 by the government of Bangladesh underscoring priority sectors. Accordingly, forty three pipeline projects were approved. However, implementation of the projects has been constrained by a number of factors. Project-specific reasons are generally ascribed to lengthy approval and construction procedures. In the PPP projects, root cause of the sloth in project implementation has originated from inexperience on the part of the government agencies to handle a rather new type of programme with which they have little familiarity and also initial hesitance on the part of the private investors to take part in this type of venture.

Keywords Public Private Partnership, Infrastructure, Development, Financial Risk, Domestic and International Agencies, ECNEC.

1. Introduction

When a collaboration involving two or more parties is established, it is done by assimilating special strengths or characteristics of the parties for achieving some shared objectives. Likewise, any collaboration between a public body and a private company may be termed as a Public Private Partnership (PPP). In the PPP operation there is a contract between a public sector authority and a private party in which the private party provides substantial financial, technical support and shoulders operational risks. The need to apply a standard model of public procurement arose from concern about the level of public debt, which grew rapidly during the macro-economic dislocation of the 1970s and 1980s. Governments in different countries sought to encourage private investment in infrastructure arising from the fact that public accounts did not distinguish between recurrent and capital expenditures. In Bangladesh, formal PPP programme was undertaken in august 2010 to tap the expertise of private sectors innovations — technical, managerial

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and financial resources and operation related assets. This way is resorted to reduce the size of public agency in these respects and also supplant public sector's constraints on these counts. One main objective of PPP is to increase the economy's investment and inclusive growth for increasing income and reducing poverty and income inequality by ensuring private sectors' involvements in projects which are helpful for these objectives and which are generally not attractive to private investors. This is done mainly by offering fiscal incentives in the form of reduced import tax on capital goods, tax holidays to reduce project implementation cost and thereby enhance its viability. Also non-fiscal incentives for priority projects are offered in the form of exemption from provisions related to insurance, banking and foreign exchange regulations etc.

Under this programme, the PPP Office was established as a separate, autonomous office under the Prime Minister's Office to support sector line ministries to facilitate identification, development and tendering of PPP projects to international standards. A PPP unit under the Ministry of Finance was established to foster an environment of fiscal responsibility and sustainability in PPP projects.

Under the PPP initiative, infrastructure development especially power and energy, telecommunication and port development are assigned the highest priority by the government. In addition to the sectors mentioned, government welcomes infrastructure development through PPP initiative in health, education, tourism, industry, information technology, supply of purified drinking water, sanitation and housing sector etc.

It has been more than 4 years since the PPP programme was launched. Allocations for PPP projects have been made in various annual budgets of the government since then. It is of interest to see the performance of the projects against the avowed policy objectives of the programme.

2. Objective and Methodology

2.1 Objective

The broad objective of the study is to examine the achievement of the PPP projects. The term 'achievement' has several connotations. It may refer to whether the approved projects are of high priority as professed by the government; whether the progress of projects implementation is as par plan; whether procurement of materials and appointments of personnel are as per expectation; whether costs of projects are as par estimation; whether there is time and cost overrun etc. Considering the fact that the projects are in their early stage of implementation the study takes up the following three issues which are:

- To see if approved projects are in time with the priorities professed by the government.
- To assess the speed of progress of project implementation.
- To identify the constraints of timely project implementation.

2.2 Methodology

The study is based on secondary data which are government documents obtained from the official PPP website. The study also draws information from research articles published in professional journals. The procedure or method of performance analysis is similar to performance analysis followed by the government of Bangladesh and international agencies like Asian Development Bank and World Bank.

3. Performance of PPP Pipeline Projects

3.1 Desirability of the Projects

The government of Bangladesh assigned highest priority to development especially power and energy and telecommunication and port development in the PPP initiative. Also health, education, tourism and information technology, supply of purified drinking water, sanitation, housing sector etc. are in the priority list. The projects under consideration in this study are the PPP projects in the pipelines (version 01-06-2016). The project types by number of projects are given below:

Table 1: Sectoral Distribution of Projects

Projects	Number	Percentage
Transport	16	37.2
Economic Zone	09	21.0
Health	06	14.0
Civil Data	05	11.6
Tourism	04	9.3
Education	02	4.6
Energy	01	2.3
Total	43	100

Transport which provides physical infrastructure has been assigned the highest priority. It accounts for 37.2% of total projects. Economic zone is given the second highest priority in terms of the number of projects. In the third priority comes the social sectors— health and education. Others in order of importance in terms of number of projects are civil accommodation, tourism and lastly energy.

All the projects in Table 1 are priority projects indicated by the government in the new PPP policy. However, energy sub-sector has only one project although it appears at the top of the priority list of the government. It can be said in passing that undertaking of projects depends on government's emphasis and priority as well as private sector's willingness on specific projects. Economic Zone and civil accommodation do not explicitly make appearance in the priority list, but these provide physical infrastructural facility to industry and other business. Growth and poverty-oriented projects of other categories like IT, Safe drinking water, Sanitation and Housing are also missing from pipeline projects. Judgment on this now may appear farfetched because Bangladesh is at the early stage of PPP programme. It remains to be seen what happens in the subsequent PPP project pipelines. Evidences of cross-country PPP ventures will be of interest in the present case. Britain has used PPP concept in the construction of tunnel, rail link, air traffic services, improving London underground rail and for defence-related contracts during the initial years of the twenty first century (Hossain, 2012). Park (2006) found that in Korea, PPP initiatives were directed to the development of school, hospitals and public housing. In US PPPs are used for the development of prisons, water supply and waste water treatment. Neighboring countries— India, Cambodia, Vietnam and the Philippines are taking advantage of PPP initiatives to develop infrastructure, tourism and energy. From the cross-country experiences it appears that Bangladesh's PPP project profiles are in line with what growth and development of the country warrant.

3.2 Speed and Timeliness of Project Implementation

Project implementation involves several stages. There are 8 formal stages (vide Appendix Table 1) starting from endorsement at PPP office through approval by ECNEC/Ministry, appointment of Advisor etc. to finally contract signing. A total of 43 projects approved within the framework of the new PPP Policy are considered for appreciation in the present study. Detailed status of implementation of various projects can be seen in Appendix 1.

Most of the projects are in their earlier stages of implementation. In this situation, it is worthwhile to scrutinize the projects whose contracts have been signed to see where they stand in respect of buying construction materials, starting of construction work, installing machinery, equipment and progress of finally implementation needed to produce final goods and services. We consider the following such 3 projects. At first, we take up Hemodialysis Centre at Chittagong Medical College Hospital. This project is in its very advanced stage of implementation. Its construction works have been completed. The required machinery and equipments are being installed. Preparations are underway to go for operation, dialysis of patients, from September 2015. The project was stipulated to be completed by 2014. Already there has been time over run of this project. At a less advanced stage of implementation is Dhaka-Elevated Expressway. It is at the early stage of its contraction. Works required to be completed before starting of construction works, such as testing of soil, buying the required equipments etc. are underway. The next project we take up for scrutiny is the HI-Tech Park at Kaliakoir, Gazipur. Contract signing part of the project is underway. After contract signing the construction phase of the project will begin. Thus it is evident that this project is likely to be completed at sometime beyond 2017, the estimated year of completion.

It transpires from the information most of the projects are in various stages of processing. For example, out of 43, only 07 projects are at ROI stage of project implementation; 17 projects are at various stages of marketing while only 04 projects so far got CCEA's final approval, and contract signing has been done for 03 projects. The overall picture shows that implementation of PPP project have been slow.

4. Some General Causes of the Sloth of Project Implementation

The projects in pipeline under the new PPP Policy framework are facing some common problems which contribute to its slow implementation. Firstly, unlike most other countries who have been successful in using the PPP initiatives, Bangladesh is a new comer in this respect. For inexperience and consequently hesitance on the part of both the government agencies and the private parties, it was not possible to make a head start at the beginning of the implementation process of the PPP programme projects. The three fiscal years 2009-10, 2010-11 and 2011-12, elapsed without any tangible results although budget allocations of BDT 25 billion, BDT 30 billion and BDT 30 billion respectively for these years were available. 'Inexperience' on the part of the government agencies seems to be one of the main reasons of this condition because this causes other failures. For the investor, it is imperative to know exact specification of various components of the project, the absence of which creates scope of arbitrariness in decision making. For the PPP projects, inaccurate specification emanating from inexperience is reported to have impeded project implementation. An investor needs to have proper framework under which investment will be safely undertaken. The framework includes administrative and legal environment without which an investor will feel unshielded. This is what is reportedly happened.

5. Concluding Remarks

This paper has examined the performance of the new PPP programme initiated by the government of Bangladesh in 2010 with the limited scope of analyzing the implementation of the pipeline projects under the programme against the avowed priority sectors (or sub-sectors) set by the government and also keeping in mind the development needs of the country in this respect. A total of 43 pipeline projects are analyzed. These projects, by and large, conform to the priority sectors of the government and in consonance with the development needs of the country. The implementation processes of the projects, however, have not been smooth, continuous and in accordance with the time paths set by the government. The final approval of the projects has taken more time than envisaged. Only 3 projects are in the final stage of the construction process of which one is scheduled to go for production of services in September. Of the remaining 40 projects, one is awaiting final approval while the other 39 projects are in the early stages of the approval processes. All in all, the PPP pipeline projects are destined to be costlier in terms of time and cost overruns.

Appendix 1: PPP Projects Pipeline (Version: 01-06-2015)

CCEA/LM Approved	Adv. Appt. (ongoing)	Adv. Appt. (Comp)	Procurement	Contract Signed/LOA Issued
43	5	30	9	3

SL.	Sectors	Name of the Project	Estimated Project Size	Approval		Project Development			Marketing			
				PPP Office Endorsement	CCEA/ LM Approval	Advisor Appt.	DFS	ROI	Request for Qualification (RFQ)	Request for Proposal (RFP)	CCEA/LM Final Approval	Contract Signing/ LOA Issued
1	Transport	Dhaka-Elevated Expressway Large	Large	N/A	●	●	●	N/A	●	●	●	●
2	Zone	Hi-tech Park at Kaliakoir	Large	N/A	●	●	●	N/A	●	●	●	●[6]
3	Transport	Hemodialysis Centre at Chittagong Medical College HosipitalExpressway Large	Small	N/A	●	●	●	N/A	●	●[1]	●	●
4	Health	Hemodialysis Centre at National Institute of Kidney Diseases and Urology (NIKDU)	Small	N/A	●	●	●	N/A	●	●[1]	●	●
5	Transport	2 Jetties at Mongla Port through PPP	Large	N/A	●	●	●	N/A	●	●	●	●
6	Zone	Economic Zone 4: Mongla	Large	N/A	●	●	●	N/A	●	●[1]	●	●
7	Zone	IT Village at Mohakhali	Medium	●	●	●	●	●	●	●	●	●
8	Transport	Multi Mode Surveillance System (Radar,etc.) at Hazrat Shahjalal International Airport	Large	●	●	●	●	●				
9	Health	Oboshor: Senior Citizen Health Care and Hospitality Complex	Small	●	●	●	●	●				
10	Transport	Upgrading of Dhaka Bypass to 4 Lane (Joydevpur-Debogram-Bhulta-Madanpur)	Large	●	●	●	●	●				
11	Tourism	Development of Tourism and Entertainment Village	Large	●	●	●	●	●	○			
12	Civil Accomodation	NHA Housing Satellite Project at Mirpur	Large	●	●	●	●					
13	Transport	Flyover from Santinagar to Mawa Road via 4th (New) Bridge over Buriganga River	Large	●	●	●	○					
14	Tourism	5 Star Hotel at Zakir Hossen Road, Chittagong	Large	●	●	●	●					
15	Civil Accomodation	Construction of BSS Bhaban under PPP	Small	●	●	●	●					
16	Transport	Hemayetpur-Singair-Manikganj PPP Road	Large	●	●	●	●					
17	Zone	Economic Zone 2: Mirersharai	Large	N/A	●	●	○					
18	Transport	Dhaka-Chittagong Access Controlled Highway	Large	N/A	●	●	○					
19	Zone	Economic Zone 3: Sherpur	Large	N/A	●	●	○					
20	Zone	Economic Zone 5: Anowara, Chittagong	Large	N/A	●	●	○					
21	Transport	Dual gauge Double line Bangabandhu Bridge	Large	●	●	●[2]	○[4]					
22	Transport	Fulchhari Bahadurabad MG Railway Bridge	Large	●	●	●[2]	○[4]					
23	Zone	Hi-Tech Park in Sylhet	Medium	●	●	●	○					
24	Transport	Dhaka-Ashulia Elevated Expressway	Large	N/A	●	●[2]	●	N/A	○			
25	Transport	Jatrabari-Sultana Kamal Bridge-Tarabo PPP Road	Large	●	●	○						
26	Transport	Construction of Laldia Bulk Terminal	Large	●	●	●	○					
27	Transport	Construction & Operation of Inland Container Terminal (ICT) at Khanpur	Medium	●	●	●	○					
28	Education	Medical College & Nursing Institute and Modernization Railway Hospital of Kamlapur	Large	●	●	○						
29	Education	Medical College and Modernization of Railway Hospital at CRB in Chittagong	Large	●	●	●	○					
30	Civil Accomodation	Shopping Mall with Hotel-cum-Guest House on the unused Railway land in Comilla	Large	●	●	●	○					
31	Civil Accomodation	Shopping Mall with Hotel-cum-Guest House on the unused land in Chittagong	Medium	●	●	●	○					
32	Civil Accomodation	Shoping Mall with Hotel-cum-Guest House on the unused Railway land in Khulna	Medium	●	●	●	○					
33	Tourism	Establishment of Intl. Standard Tourism Complex at Existing Motel Upal Compound of BPC at Cox's Bazar	Large	●	●	○						
34	Transport	Construction of a New Inland Container Depot (ICD) near Dhirasram Railway Station	Large	●	●	○						
35	Energy	Construction of LPG Import, Storage and Bottling Plant at Kumira or any Suitable Place at Chittagong Including Import Facilities of LPG, Jetty, Pipeline and Storage Tanks under PPP	Large	●	●	○						
36	Zone	Economic Zone 1: Shirajgonj	Large	N/A	●	N/A	N/A	N/A				
37	Tourism	Establishment of Sabrang Exclusive Tourism Zone	Large	●	●							
38	Health	Medical College and Modernization of Railway Hospital at Saidpur in Nilphamary	Large	●	●							
39	Health	Medical College and Modernization of Railway Hospital at Paksey in Pabna	Large	●	●							
40	Tourism	New Modern Medical College & Hospital of 250 beds on the unused land in Khulna	Large	●	●							
41	Transport	2nd Padma Multipurpose Bridge at Paturia-Goalundo	Large	●	●							
42	Transport	3rd Sea Port	Large	●	●							
43	Zone	Development of Economic Zone (EZ) at Jamalpur with Private Sector Participation	Large	●	●							

Note: 1. Combined RFP & RFQ, 2. Advisor appointed for feasiblity only, 3. Technical Feasiblity Completed, 4.Technical Feasiblity Ongoing, 5. In-house Consultants, 6. Letter of Award issued, o Process Ongoing, ● Process Completed

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Bangladesh Poverty Assessment Report of the World Bank: A Primary Review

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Abstract The issue of poverty alleviation occupies the central front of development grading consideration of developing countries like Bangladesh. So as to measure the achievement rate regarding poverty reduction in a background fulcrum like MDGs, governments of Bangladesh set different period-bound targets to bring down poverty gradually. Though the results of target achievement displays encouraging signs as orchestrated by the government and even by the World Bank report, the real outcome of the achievement was not that sweeter for the governments as it should had been. This study seeks to look into the real scenario of poverty alleviation side by side with the World Bank findings pointing to the issues of corruption, poor-non-poor consumption rate, diets and nutrition of the poor, education of the poor and more other factors like these and tries to bring to surface the limitations of the World Bank findings as well as throwing suggestions for an ideal strategy for poverty reduction.

Keywords Millennium Development Goal (MDG), Household Income and Expenditure Survey (HIES), Poverty, Inequality, Development, Corruption Perception Index (CPI), Labour Income, Dependency Ratio.

1. The Background

Many developing countries now actively monitor the degree of achievements in respect of Millennium Development Goals (MDGs). For this they have to estimate the level of poverty regularly and critically monitor its trend over time. Bangladesh is also not an exception. A major purpose for such an exercise is to find out whether actual poverty reduction is on track with the goal of halving the poverty rate of Bangladesh within another twenty five years from what it was in 1990. That means reaching the target poverty rate of 28.5 per cent in 2015 i.e. within two years from now. In the year 2000 on the basis of Household Income and Expenditure Survey (HIES) data absolute income poverty of Bangladesh was 48.9 per cent for national, 35.2 per cent for urban

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and 52.3 per cent for rural areas respectively. So, the goal was set to reduce the national poverty rate by another 20.4 percentage point over the time period of 2000-2015. It naturally implies an average reduction of 1.36 percentage point per year for the next two years.

After 2000, there were two more rounds of poverty estimates, one was of 2005 and another of 2010 based on two subsequent rounds of HIESs carried out in those years. The poverty estimates of 2005 were 40, 28.4 and 35.2 per cent for national, urban and rural levels respectively. This means that during 2000-2005 period national poverty rate had come down every year on an average by 1.78 percentage point which is higher than what was required to remain on track with the set goal of MDGs. Similarly in 2010, since the national poverty rate was estimated to be 31.5 per cent, so the average yearly rate of reduction in poverty came around 1.7 percentage point which was also higher than what was required to be on track with the MDGs. These findings are indeed good news for Bangladesh, especially for the three regimes which were in power during these periods — BNP (Bangladesh Nationalist Party) regime, army backed Caretaker regime and Awami League regime. This shows that neither political regime change nor global economic shock could decelerate the rate of poverty reduction in Bangladesh during these periods. We also know that during this whole period, 2000-2010, the estimated growth rate of GDP had remained "strong and steady" in and around 6 per cent. This is also a proof of the resilience of the current economy of Bangladesh against political and economic shocks. This is indeed a very rosy picture which does not tally well with the recent defeats of the candidates of the ruling party in the recently held popular elections.

Several possible defensive explanations were forwarded by the ruling party leaders to explain their defeats e.g. they welcome the fact of high growth and high poverty reduction during 2005-2010 and also pointed out that these developments were mainly concentrated in the rural areas while the recent votes were mainly confined to the urban municipal areas, so they still continue to expect that these results will change as voting moves to the rural areas. It remains to be seen for future election results to test the plausibility of this suggestion. Meanwhile it seems that the popular belief is two other factors namely *mishandling of religious sentiment of the voters* and *widespread micro corruption* might have caused this unexpected defeat of the ruling party. If one looks attentively at the history of political regime changes and evolution of people's general perception during this decade of 2000-2010, the facts that emerge are general persistent dissatisfaction among the mass people against corruption and also a deep anger and hatred against growing injustice and inequality in the society which are often revealed through the primitive revolts in the garments sector. The Corruption Perception Index (CPI) sponsored by Transparency International Bangladesh (TIB) with all its limitations also indicates that people of Bangladesh are prone to believing that during 2000-2010 period the degree of corruption or abuse of power by the ruling classes generally has not improved during most of the period. The CPI, its score and ranking for different years during this period are given in the Table 1.

Table 1: Corruption Perception Index of TIB During 2001-2012

Year	No. of Countries	Rank of Bangladesh	Score of Bangladesh
2001	91	91	3
2005	158	158	14-20
2008	180	147	21
2010	178	134	24
2012	176	144	26

Source: Different International Reports of TIB

The table shows that the CPI rank of Bangladesh was the worst in the world till 2005. From 2005 to 2010 that is during the Caretaker regime and first two years of Sheikh Hasina regime, the rank improved from 158^{th} position to 134^{th}. But during the last two years shown in table of Sheikh Hasina regime the rank has again come down to make Bangladesh the 144^{th} corrupt state out of 176 states of the world. Thus in the eyes of the general people corruption and mal-governance remain as a central issue in the economy and society of Bangladesh. This again inevitably created a huge amount of black money in the economy and the owners of it usually transferred them to foreign countries or used them for buying unproductive assets and thereby producing a widely demonstrated unjustified inequality of consumption, income, wealth and power in the society. Under this situation high growth is inevitably accompanied with high and increasing inequality and that inevitably restrains the elasticity of poverty reduction with respect to growth. Thus the two issues of corruption and inequality are very crucial for determining the future poverty reduction strategy of Bangladesh as well as the future correlation of political forces.

2. The Story Told by WB

The *key messages* of the report titled *Bangladesh Poverty Assessment: Assessing a Decade of Progress in Reducing Poverty, 2000-2010* are presented in the slim elegant booklet accompanied with the more fat full report of WB. In the more popular slimmer edition the “key messages” are arranged under four subheadings.

Under the first subheading, *A Remarkable Decade of Progress,* three positive achievements and another mixed achievement story have been mentioned. Firstly, poverty declined by 1.7 percentage points per year during this decade and not only the proportion of poor people but also the absolute number of poor people have decreased by 26 per cent. Secondly, poverty patterns have changed dramatically narrowing the development gap between the eastern? Chittagong, Dhaka and Sylhet and western? Barisal, Rajshahi and Khulna? regions. Thirdly, there were visible signs of improvement in the living conditions of the poor in terms of *access to electricity, improved housing* and *possession of amenities like mobile phones,* etc. The *bitter-sweet* fourth story is about the health conditions of the poor. Access to health facility has increased i.e. positive but diets and nutrition of the poor have not improved.

Under the second subheading *Drivers of Poverty Reduction***,** two major poverty reducing *drivers* were identified: *Increase in Labour Income* and *Decrease in Dependency Ratio.* The main point of this driving mechanism is pretty simple. If any poor household can have a lower dependency ratio and each of the earning members gets an employment with a higher level of productivity or earning then it will be easily possible for the household to cross the poverty line income/ consumption expenditure and thus become a non poor household. The report claims that the increase in labour income was propelled by a shift from agricultural job to non agricultural job, from self-employment to salaried employment and from less skilled job to more skilled job during the first half of the decade. But during 2005-2010, the main drive to increase the labour income had come from the rise of the real wage within the agricultural sector itself. This rise of real wage of the agricultural labour marked an immensely significant change which has overturned an age old secular trend of declining agricultural real wage in the rural areas of Bangladesh. In the main report a box is presented with the title, *Rising Real Wage: Is Bangladesh Reaching the Lewis Turning Point,* has given the standard explanation of such a rise. The long concluding observation in the box *... Rising rural wages precede rising urban wages — as well as finding from our micro decomposition analysis (chapter 3) that the growth of labour income in rural areas was the most important driver of poverty reduction. Given rising labour costs in China and India, Bangladesh's comparative advantage in labour intensive industries is going to become more pronounced. Therefore, the trend of rising wages is likely to continue, which is good news for the poor, is interesting.* This optimism is welcomed but it may not hold good if the challenge of "investment bottlenecks" in the industry and service sectors are not tackled properly. The danger may increase further if the neo-rich of the rural society resort to a premature agricultural mechanization in response to the rising labour costs and an unfavourable terms of trade for the agriculture. The second driving force of this period is identified as *Lower Dependency Ratio*; it had originated because of decreasing fertility rate and was sustained by increased participation of the women folk in the labour force in both rural and urban areas as well as increased employment opportunity was created in both rural and urban areas. The challenge here will be to sustain these positive trends in future. But this again will largely depend on the rise of the standard of living and education of the poor to an extent where cultural values and reproductive behaviour also begin to change.

Under the third subheading, *Seasonal Poverty: Shocks and Coping Mechanism of the Poor*, an interesting finding of the report was about the impact of the food price shock in 2007-2008 on the rural extreme poor. The dynamic picture presented tries to argue against the standard assumption. It suggests that initially the extreme poor may have to curtail its food consumption more than the non-poor households: -22% by the poor and -4% by the non poor respectively, but in the long-run as the price shock is permeated to the non-agricultural sectors and a process of wage adjustment takes place in the rural areas so the rural poor also start regaining its loss while the non-poor and poor from the non-agricultural urban sectors although may have suffered less in the short-run but in the long-run was not able to regain even that small loss due to the absence of any wage adjustment process there. This implies that the overall effect of the price shock of 2007-2008 was not negative in the long-run for at least the rural poor. However, in the case of natural disaster type shocks, occurring mainly in a few rural pockets of extreme deprivation, no such long run adjustment process is available hence there remains a need to continue supplementary transfer programmes like subsidized microcredit services and a set of Safety Net (SN) programmes for these marginalized extreme poor. Here the report correctly draws our attention to the inadequacy of the volume of such transfers in comparison to the need as well as to make these supplementary programmes more efficient and effective by correcting both types of *Inclusion* and *Exclusion* errors. It also recognizes the better regional targeting performance of SN programmes in the second half of the decade.

Under the fourth subheading, *Main Policy Implications*, eight policies were suggested. These policies can be divided into actually three general strategic goals which are based on the previous analysis of the positive experiences of the period 2000-2010. The first strategic goal is to continuing the increasing trend in *labour productivity and labour* *income*. This can be realized by tackling both demand side and supply side problems. One obvious suggestion is to improving access and quality of the health and education services for the labouring people, especially the poor. With new skill new job avenues will become open for the poor in the rural, urban as well as foreign sectors. However, the important question in this connection remains unanswered — who is mainly going to do that — Private Sector or State or Non-Government Organizations (NGOs) and also what kinds of education will it be and finally wherefrom the required finance will come? The policy of privatization of the social sector services has increased their prices as well as created a deep unjustified social divide in the education system of our country not so much in terms of access but more in terms of quality education for the poor. Same conditions prevail in the field of health services. But even the proper management of the social sectors and turning poor into *healthy and educated* will not be enough if they are not provided with corresponding decent jobs from the supply side. For ensuring employment of these improved human resources the report suggests *that the demand for salaried work in the manufacture and service sectors continue to grow.*

The question is who those employers/entrepreneurs are going to be and how are they going to be induced to undertake the necessary material investments first and then generate a complementary demand for the more skilled labour at a supposedly higher real wages? In the fat report at page 75 a possible answer to this crucial question has been attempted. There it is written, *Movements into non-farm work were more pronounced during the first half of the decade, during which workers were absorbed in salaried and non-farm, self employed work. Employment by the small, medium and large firms expanded over the last decade. Going forward, however, the key bottlenecks to investment growth, including the reliability of electricity, corruption, and a workforce that is able to meet the demands of the market, must be tackled. Movements into self-employed work, on the other hand, led to growth of microenterprises throughout the country. These enterprises are very small, concentrated in rural areas, and largely participating in the service industry. Individuals working in such firms are typically not poor, but micro firm owners cite lack of financing as their main constraint, particularly in rural areas.* Anybody going through this long statement will immediately recognize that the market forces and the entrepreneurs alone will not be able to realize this employment based strategy of poverty reduction. The market forces and real entrepreneurial initiatives must be supplemented by other type of regulations and initiatives from an active state and an empowered collective of the poor. An employment oriented poverty reduction strategy will actually require supplementary public goods and public policies like the provision of both physical and social infrastructure, provision of cheap capital to specialized sectors, ensuring a corruption free bureaucracy, control of the bank defaulters and crony capitalists, protection of trade union rights of the emerging working forces, strategic trade rather than free trade, selective use of subsidy, a minimum level of agrarian reform, etc. All these supply must come from the state. But the report carefully refrains from explicitly mentioning the problematic role of the existing state, and does not dare to venture into these structural macro policy issues correlated with the politics of the day. The second strategic goal is to use the so called *Demographic Dividend* optimally. The report suggests several policy measures e.g. delaying the age of marriage, encouraging female participation in education and productive work, continuing family planning services, especial emphasis for youth development and finally also not to forget to prepare for aging out of the demographic dividend. The third and the last strategic goal is to improve the *survival capacity of the vulnerable poor.* The poor in our country is seasonally hit by the price shocks or by the natural disaster. The policy measures suggested are: improving the effectiveness of the standard safety net programmes including the programme of micro credit, seasonal intervention in both product market and factor market to ensure stability of wages and prices of essential products and also linking the cash transfers to human capital formation among the poor.

In general it can be said that in this report the analysis of the recent experience of poverty reduction during 2000-2010 periods was done very meticulously but the policy implications derived from that analysis has simply been taken over as it is and projected into the future without further analysis of the real structural and political constraints that are now knocking at the door. For example, one noteworthy feature of the report is to bring out the distinct rural agricultural bias of the mechanism of poverty reduction during the second half of the decade, but if there occurs a regime change in the next election leading to an opposite political power with urban bias, what will happen then? What will be the impact of a more conservative future regime on the policy of using the *Demographic Dividend?* Lastly, if a chronic political instability sets in, will the positive trends be sustained?

3. The WB Report and the Issue of Corruption

Corruption is a major constraint against development and democracy in all South Asian countries. The problem is particularly acute in

Bangladesh. It is usually defined as "abuse of power for meeting personal ends at the cost of social ends." One widely prevalent form of corruption among the public officials is called *bribery*. The corrupt officers taking bribes actually increases his/her personal income at the cost of business by charging extra bribes or so called speed money charges for any kind of business related services e.g. utility services, law and order services, tax services, obtaining credit or import license from a public agency or any certificate from a certificate giving agency. The WB report discusses about the corruption issue as a constraint against good business which causes shrinkage in the demand for labour and thereby misses an opportunity for poverty reduction through increasing employment. It illustrates the incidence of this particular type of corruption with the help of 2007 Bangladesh Enterprise Survey (BES) data. This survey had collected information from over 1400 firms across the country. BES follows internationally practiced method of representative sample survey and covers only non agricultural firms which have more than five employed workers. The firms are asked to reveal the important constraints against business in order of their importance. The findings of the BES survey was presented in the main report at page 54. Of course, electricity was identified as the number one constraint by the seventy eight per cent firms in Bangladesh. But immediately after that "corruption" was identified as the second biggest constraint by fifty five per cent firms. Eighty five per cent of firms reported that they had to give gifts to public officials "to get things done" compared to 37 per cent for the rest of South Asia! The report also discusses about the much publicized corruption of the local government around the system of various cash and kind safety net transfers in the rural areas. The World Bank report claims that the so called leakage (proportion of non-poor recipient Household) in these programmes was 44.3 per cent in 2005 and it further increased to become 59.8 per cent in 2010. And targeting efficiency (share of total programme spending accruing to the poor) was only 52.6 per cent in 2005 which further deteriorated to the alarming level of only 35.3 per cent in 2010.

The macro corruption indirectly influences poverty outcome by reducing investment and growth. A recent example in this area is the shying away of a 1.2 billion dollar Organization of Development Agencies (ODA) investment from the Padma Bridge project. It will not be befitting of the corruption scandal around Padma Bridge issue mentioned in this connection. The WB had over-reacted on the Padma Bridge issue. Since no actual bribe was given and the Bangladesh Government had already agreed to carry out a process of investigation and also allowed the WB team to directly supervise the investigation process and had withdrawn the main accused persons from the concerned project and other positions of power, so the WB could easily go on with the project while the investigation should have also been carried out side by side. Now by withdrawing herself in a hurry WB had actually made the people of Bangladesh the victims instead of netting the real culprits. Besides these macro type corruptions, there are also the second type of micro corruption mentioned above which directly deprives the rural poor from their dues. So, it was expected that both macro and micro corruption issues would get somewhat greater attention in the report especially when WB has begun to exert its pressure on some aid recipient countries for their alleged corruption.

4. The WB Report and the Issue of Inequality

The problem of poverty is directly related with inequality. The poverty outcome can be decomposed into growth effect and inequality effect. The report also recognizes that and presents such an analysis in the very beginning of the report. The relevant information at page 13 is used to prepare the following table.

Table 2: Growth and Redistribution Components of Changes in Poverty

Poverty Reduction Components	National Poverty Reduction (2000-05)	National Poverty Reduction (2005-10)
Total Poverty Reduction	-0.09	-0.09
Redistribution	0.01	-0.02
Growth	-0.10	-0.06

Note: The results are obtained by taking the average of the two decompositions— 2000 and 2005.
Source: HIES 2000, 2005 and 2010.

The above analysis clearly reveals that poverty reduction is best served when we have a golden situation of improvement in both growth and redistribution. From the report we find that in the first half of the decade the redistribution impact on poverty was not favourable and it had actually curtailed the positive impact of growth on poverty by one percentage point. But in the second half of the decade more favourable redistribution impact added to the positive growth impact on poverty by an extra two percentage points. Noting this contrast the report concluded, *The decomposition suggests stark differences in the underlying components of poverty decline between the first and the second halves of the decade* (P: 13). This has a fundamental significance for the determination of future policies of poverty reduction in our country. If one takes this observation seriously one has to reconsider all those forgotten radical policies of redistribution of income, wealth, land and other assets that can albeit favour the relatively poor to strengthen the "redistribution impact" on poverty. This actually dethrones the trickle down model of growth for reducing poverty and suggests that there may be a trade-off between growth policies and redistribution policies. However, there may be a large number of redistributive policies which are likely to have positive impact on both growth and distribution. For that it is necessary to redirect all productive resources to the relatively less rich classes who are also capable of becoming relatively more productive than those rich who are currently using the resource sub-optimally or simply squandering them away. One immediate such policy example can be the transfer of all sub-optimally used land to the more productive user of land. Land belonging to the groups like absentee landlords, local landlords not using their land intensively enough, illegal owners of Khas land and all those speculator land grabbers who have accumulated land just for realizing a high future price can be persuaded or encouraged to will-fully sell/give up their land right and transfer the land to a state owned land bank, which may then lease out that land to a more produc-tive and relatively less rich man on the condition that he/she will have to use it more productively than the former owners of that land. Another interesting example can be a micro finance bank owned and run by the poor borrowers themselves.

5. Some Conceptual and Estimation Issues

There is a fundamental problem in the Cost of Basic Need (CBN) concept of poverty. The CBN poverty line is essentially a relative concept and the poverty line income/consumption expenditure of a country generally moves upward with the overall increase of the average standard of living of a country. In a primitive society everybody may consume daily less or equal to 2112 calorie but still relatively speaking nobody will be considered poor there from their own point of view. On the other hand in a very rich country the poverty line cost of basic need may be high enough to cover the cost of amenities like car, refrigerator and TV. Martin Ravallion, the poverty specialist of WB, had himself taken note of this intrinsic relativity of the concept of poverty and in one of his early writings had proposed an alternative way of measuring poverty. He had proposed to measure the poverty rate of a country by measuring the proportion of those in the total population who earn/consume less than one third of the average income/consumption of the country. The WDR-2000, whose theme was *Attacking Poverty*, had actually used this alternative notion of poverty to measure relative income poverty for some selected regions for a few selected years during 1987-1998.

However, this concept and measure of relative poverty was not pursued further in later period. Another author related to the writing of WDR-2000 had also tried to define poverty subjectively and had collected 60000 voice records from the poor all over the globe who were asked to define poverty themselves. The voice records of the poor defining poverty are available in WB website and anybody listening to them will only be too happy to reject the presently used "One dimensional Live-stock Concept of Absolute Poverty."

The poverty estimates of our country are based on basic data from a very questionable data set HIES carried out regularly at five-year interval in Bangladesh. The definition of consumption and income used in HIES to collect data has been challenged vigorously by A. R. Khan (2005) has come out with a completely different set of measurements of poverty and inequality for Bangladesh using the same HIES 2000 and HIES 2005 data sets but with a different definition of income and consumption. Moreover, he used the income data for measuring inequality of income rather than the consumption data which was used by the WB to measure inequality. All economists will agree that income inequality is in general higher than consumption inequality. These changes of definitions and estimates have completely changed the analytical perspective and the conclusion about the trend of inequality during the period of 2000-2005. The following table presents inequality data for both rural and urban areas as measured by WB and A. R. Khan respectively for the years 2000 and 2005.

Table 3: Consumption Gini of WB and Income Gini of Khan (2000-2005)

Year	Consumption Gini Ratio by World Bank (G_C)		Income Gini Ratio by A. R. Khan (G_I)		Ratio of Consumption Gini and Income Gini (G_C/G_I)	
	Rural	Urban	Rural	Urban	Rural	Urban
2000	.271	.368	.355	.438	.76	.84
2005	.278	.353	.405	.475	.68	.74

Source: Consumption inequality estimates are taken from the WB poverty assessment report and income inequality estimates are taken from A. R. Khan (2005).

From the Table 3 it can be observed that in general consumption inequality is much lower than the income inequality and the gap between the two are increasing over time. Moreover, according to the WB data consumption inequality had remained almost static in the rural sector during 2000-2005 whereas income inequality as measured by Khan shows an increase of 14 per cent. The consumption inequality in the urban sector is shown to be decreasing by the WB during 2000-2005, whereas Khan Data shows that the income gini ratio has increased by

8 per cent. What all these discrepancies actually mean in terms of our future policy exercises? This can be answered by using Khan's own modest words. In the conclusion of his long technical paper he wrote, *Given the present state of the data— There is little empirical basis to support the position of the one or the other of the protagonists in the ongoing debate about the actual magnitude of change in poverty. Reasonable illustrative and simulation exercises can, of course, be made. When such exercises explore all major alternatives and are duly qualified, they can shed useful light. Such exercises that exists strongly suggest that the major proportion of the potential reduction in poverty, defined as the rate of reduction in poverty that would have obtained in the event of unchanged inequality in the distribution of living standard, was lost due to increased inequality.*

However, the WB analysis has been extended up to 2010 claiming a more distinct fall in the gini ratios of consumption in both rural and urban areas during that period and obviously that resulted in an enhanced decline in poverty by the combined positive impact of both growth and redistribution. One wonders what the results will be if another new exercise is made by using A. R. Khan's method for this extended period of 2005-2010. Will it prove that a significant negative effect of increasing inequality on the rate of poverty reduction continues to exist in this period too?

6. Conclusion

The country is facing a national election where poverty, inequality, development, corruption all will be carefully reviewed by the voters to pass a judgment on the performance of the incumbent government and people may also compare the past performance of the main opposition party in these respects when they were in power. Given this background the newly published "poverty assessment document" is bound to have a great political significance.

This paper points out the driving forces behind this positive picture as depicted by the World Bank and tries to ascertain whether they can be sustained in the next post election regime. The natural resilience of our economy has been well recognized nationally and internationally but the negative factors of corruption, political instability and inequality are the chief barriers against such a positive performance in future. The World Bank report was criticized for not dealing with these constraints more elaborately. The report was busy with the task of interpreting what actually happened and did not pay equal degree of attention to the future path of development, thus its policy suggestions have become a mechanical projection of the past into the future.

The paper also criticizes the traditional concept of poverty and urges the policy makers to estimate poverty in a new manner so that the concept of poverty becomes relative and multi-dimensional. Subsequently, a very brief outline of an ideal strategy for poverty reduction was put forward just to project a possible future direction of development. The issue of corruption and inequality are identified to be the most important barriers against growth and poverty reduction.

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Emerging Issues in Corporate Governance

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Abstract In recent years corporate governance has turned out to be a much heeded issue in corporate world across the globe. Good corporate governance is rightly considered as the guarding mechanism of protecting shareholders' and stakeholders' interests as well as ensuring ethical corporate practices. This study endeavours to look through the outcomes of ineffective corporate governance policies and its horrendous impact in global economy. It also tries to examine the justification of new act and policy's evolution in the context of Bangladesh as well as of the world in the backdrop of a number of cases of giant global corporate bodies' misrepresentation of financial statements and its disastrous consequences that triggered the recent economic recession. At the same time it further tries to look into the concerns of technological evolution driven product diversity and potential risks involved with it and suggests measures to address the challenges.

Keywords Corporate Governance, Governance Policy, Independent Director, Product Diversity, Transparency, Good Governance.

1. Introduction

Corporate governance perhaps has been the most widely discussed issue in the last couple of decades. It has received immense attention from policy makers, regulators and various stakeholders especially shareholders around the globe. Governance in financial institutions, particularly, in banks was considered most sensitive for their penetrating role in financial intermediation. The Basel Committee on Banking Supervision published its initial guidelines in 1999 which was later revised in 2006. Organization for Economic Co-operation and Development (OECD) framed principles of corporate governance in 2004.

2. Corporate Governance Concept

The principles laid down by OECD define corporate governance as entailing "a set of relationships between a company's management, its board, its shareholders, and other stakeholders. Corporate governance also provides the structure through which the objectives of the company

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are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives which are in the interest of the company and its shareholders and should facilitate effective monitoring. The presence of an effective corporate governance system, within an individual company or group and across an economy as a whole, helps to provide a degree of confidence that is necessary for the proper functioning of a market economy."

Corporate governance is a many-sided subject. It encompasses diverse aspects of governance, such as issues of accountability, disclosure, transparency and fiduciary obligations and it also emphasizes the implementation of policies and strategies with strong focus on shareholder and stakeholder welfare.

3. Thrust for Re-structuring Governance Policy

A series of financial statement rigging, corporate abuses and failures, bankruptcies and government sponsored bail outs created forceful demand and urge for overhauling of corporate practices. Financial and accounting scandals at reputed companies such as Enron, Global Crossing, Tyco International, Adelphia, Peregrine Systems and World-Com sent shockwaves in global economy and battered the financial system, particularly in the USA. It cost investors billions of dollar as, not only the prices of fraud ridden companies but also the overall stock market prices suffered sharp fall. Vulnerability of risk mitigation and risk management tool was clearly exposed. Policy makers and the regulators were compelled to wake up and take remedial measures. A raft of rules, regulations was enforced along with creation of several institutions and agencies. Grant Kirkpatrick of Organization for Economic Cooperation and Development (OECD) remarked that "The financial crisis can be, to an important extent, attributed to failures and weaknesses in corporate governance arrangements. When they were put to a test, corporate governance routines did not serve their purpose to safeguard against excessive risk." A number of weaknesses have been apparent. A large number of studies and empirical evidence suggest that weak corporate governance has been associated with financial reporting fraud and irregularities. In response to the spate of widely publicized financial frauds, regulators around the world decided to undertake forceful reforms in this area.

4. Evolution of SOX Act and Its Implication

A raft of comprehensive and far-reaching rules and regulations were enacted in many countries to preempt repeat of such crisis which erode the confidence and trust in the financial system. The most prominent of such measures was the Sarbanes-Oxley Act, July 2002 in the USA (known as SOX). The Act, also known as the Public Company Accounting Reform and Investor Protection Act, established the Public Accounting Oversight Board (PCAOB) to oversee accounting firms. The Act introduces several stringent conditions and guidelines for accuracy and reliability of financial statements. PCAOB was entrusted with registering, overseeing and disciplining accounting firms which audit companies and set standards to be followed by auditors. Another key requirement was the independence of statutory auditors meaning that they cannot get involved with consultancy or other tasks of companies they audit. Many were of the view that Enron's auditor at the time of accounting scandal, Arthur Andersen was not dutiful as it simultaneously undertook consulting services for Enron.

SOX was not confined to auditing only; the Act also includes a number of important corporate governance principles-expansion of the role and responsibilities of audit committees, condition that at least one member of the audit committee to be qualified financial expert, Chief Executive Officer (CEO) and Chief Financial Officer (CFO) of a public company to personally certify the accuracy of various financial statements with the provision of criminal penalties in case of false certification.

SOX also impose a set of tough disclosure requirement. For example, material changes to a company's financial condition must be reported on "rapid and current basis." SOX goes so far as to introduce retention policy for business records including electronic records and e-mail. Many other countries also embraced sweeping reforms in the area of financial disclosure and transparency.

Although the much publicized reforms helped in bringing down the cases of financial reporting frauds, distortions in disclosure and transparency in financial statements continue to occur.

5. Latest Economic Depression and Call for Tougher Rating Framework

A variety of far-reaching transformation took place in the financial market. These include the growing use and importance of non-equity financial instruments, new types equity ownership, radical changes in the services provided by the financial intermediaries and the thrust on harmonization of internationally diverse corporate governance practices. The efforts at global accord on unified accounting system as a result of cross-border listings and investments also figured prominently. The world was taken aback again by a number of very high profile accounting scandals. Perhaps the most damaging was the collapse of the sub-prime mortgage market in the USA in 2007. This crisis was squarely blamed on the failure to evaluate the high risk embedded in the securitized financial products by repackaging poor, sub-standard mortgage loans. It later turned out that a number of reputed investment banks misled the investors in selling the products. The loans were of low credit quality and due diligence was not done. Many financial institutions, including top placed ones, had substantial investments in the high risk sub-standard mortgage loans. More than 80 per cent of the sub-prime loans were made by private lenders to low and moderate income bracket borrowers. Only one out of top 25 sub-prime lenders was subject to usual laws and regulations governing the housing loans. There was widespread use of the off-balance sheet items including Special Purpose Vehicle (SPV). Two government sponsored institutions, Fannie Mae and Freddie Mac had issued debt to purchase sub-prime mortgage-backed securities. Prominent and large investment banks, such as Deutsche Bank, Merrill Lynch, Morgan Stanley, Citigroup, Union Bank of Switzerland, Goldman Sachs and Bank of America and some other institutions were involved with the sale of these loans. The US SEC charged a number of institutions with misleading the investors with issuing opaque and complicated financial instruments which veiled the actual risk contained in the instruments. Quite a sizeable number of investment banks, bank holding companies, and other institutions including the above mentioned ones, admitted to the SEC accusations and agreed to pay hefty amounts to settle the charges. But another new and alarming development took place at that time. Top three credit rating agencies in the world e.g. Standard and Poor's, Fitch Ratings and Moody's Investors Service were censured for giving undeserving high ratings to the complex instruments. These instruments were assigned "investment grade" ratings including Triple A rating which is reserved for very quality financial instruments with low risk. Certain institutions which could only invest in "investment grade" securities were terribly entrapped into buying these securities on the strength of good rating given by the above rating agencies. This was indeed a serious and very undesirable development as ratings were manipulated in case of loans to home-buyers worth more than three trillion dollars. As the crisis unfolded, many of these triple A rated products were downgraded sharply to "junk" status by 2010. The rating manipulation was mainly responsible for the collapse of three big and the famous investment banks, namely Bear Stearns, Lehman Brothers, and Merrill Lynch. Investors filed a large number of law suits against the rating agencies accusing them of inaccurate ratings as well as of fraudulently issuing inflated ratings for securities, and of "misrepresenting the credit risk of complex financial products," thereby defrauding the investors. Moody's and Standard and Poor settled two lawsuits for undisclosed amount. But the fact remains that this saga had caused substantial damages to financial markets and investor trust. There has been growing impression that corporate governance reforms undertaken were not very helpful in promoting the cause of corporate governance while disclosure and transparency in financial statements remained elusive. The responsibilities discharged by the directors, especially independent directors and audit committee were subject to criticism.

Lehman Brothers, a globally acclaimed investment bank and brokerage firm, went bankrupt for its huge exposure to sub-prime mortgage securities and very high level of leverage. At the time of collapse, it was the fourth largest investment bank in the USA. In 2007, Fortune magazine had ranked it as "the most admired securities firm." But due to wrong calculations, and poor risk management, it incurred substantial loss and became the biggest victim of sub-prime mortgage-induced global financial crisis. Auditors for the company, another globally reputed firm, Ernst and Young failed miserably in discharging its duty.

6. Mis-representation of Financial Statement: A Cross Country Instances

The debacle at reputed Indian IT Company, Satyam Computer Services in 2009 clearly demonstrated the weaknesses in the position of the board of directors including independent directors. The chairman of Satyam admitted to large scale falsification of financial statements including fixed deposits and cash and bank balances with the total amounting to Indian rupees 78,000 million. Incredible though it may sound, at the time of the scandal; nine-member board of directors of Satyam included six independent directors who were all reputed personalities and professionals including a professor of Harvard Business School and Dean of Indian School of Business. It was later learnt that a whistle blower had informed, through e-mail, the Chairman of the audit committee who was an independent director and other members of the committee of irregularities, but they decided to remain silent. This was a flagrant failure by the audit committee chairman. In this episode also, a famous audit firm, Price Waterhouse, showed extreme negligence as it failed to unearth the massive accounting and financial deception. Investigation revealed manipulation of software and serious shortcomings in audit controls.

In September 2012, executives at Olympus, Japanese camera maker, pleaded guilty to filing fictitious financial reports related to USD 1.7 billions accounting fraud.

Very recently, in September 2014, Tesco, the largest supermarket in Britain, inflated profit by GBP 250 million. In this case, too, the ten-member board of directors had only one executive director; all other were non-executive directors with illustrious background. Nonetheless, a few executives could indulge in doctoring of accounts of such magnitude. Many other similar financial frauds took place in last few years exposing the deficiencies in prevailing corporate governance practices. Particularly, the issues of board independence, roles of independent directors, audit committees, executive remuneration and compensation have been subject of intense debate. Citing the catastrophic event of sub-prime mortgage loan crisis, many argued that where public money is involved, everything cannot be left to the market forces alone and 'self-regulation is not necessarily in the interest of the stakeholders including shareholders and the market. There has been growing calls for rigorous regulations for the financial transactions, limiting the scope for issuing opaque and shadowy financial products which often conceal true risks. Derivatives and securitized instruments and the over-the-counter market for such products were severely criticized for the financial crisis.

7. Growing Concern on Corporate Governance in '90s

In the first half of 1990s, corporate governance drew far-reaching focus and press coverage because of a series of dismissals of CEOs by their boards e.g. IBM, Kodak, Honeywell. The California Public Employees' Retirement System (Cal PERS) orchestrated several institutional shareholder activism aimed at forcing the independence of the CEOs from their boards.

Perhaps the most disappointing area of the financial crisis was large-scale failure of the risk management tools. In large number of cases, risk management was not properly linked to specific corporate strategy and was not based on enterprise (company). Risk management was fragmented and was thus not effective. Most significantly, boards were either ignorant of risk that a company faces or were hesitant to get involved in the process. In some cases, risk managers and other risk officials were not associated with the key decision making process.

8. Independent Directors: The Bedrock of Corporate Governance

Independent Directors (IDs) are at the heart of corporate governance in the stock exchange listed companies. They are entrusted with certain crucial duties as alert watchdog, saviour of interests of shareholders, promoter of transparency and disclosure. They are relied upon to detect malpractices, uncover corporate fraud, unearth misappropriation and bring to light non-compliance. Accordingly, IDs are expected to be honest, diligent and righteous. The idea of IDs originated basically in the USA, the largest economy in the world with expansive private sector. But before 1950, boards in US companies largely comprised 'insider directors' who served as executives of companies. The boards mainly performed advisory functions with virtually no oversight functions. Beginning in 1950s, US companies gradually inducted 'outside' directors; but they also refrained from taking any monitoring role, as they were closely associated with the owners. In such situation, IDs had deep connection with the owners such as legal advisors, suppliers, etc. and were sympathizers of the management and owners.

The notion of effective IDs in the USA gained ground in the 1970s. In this period, IDs were called upon to assume supervisory roles. This period marked concrete steps towards meaningful corporate governance. The US SEC and New York Stock Exchange endorsed the formation of audit committees with independent directors.

The Sarbanes-Oxley (SOX) Act, 2002, radically transformed the authority of IDs as it:

1. Required audit committees, independent management for all listed companies
2. Required the independent audit committee, rather than the management, to be responsible for the appointment, compensation and oversight of the external auditor.

The SOX made it mandatory for the boards of the companies listed on US stock exchanges to form audit committees with directors independent from management. The SOX vastly widened the responsibilities of the audit committees. This was a big leap forward.

The frustrating performance of the board of directors at a good number of companies, especially financial companies, has given rise to several vital issues:

1. Independent Directors, as exemplified by the instances at Satyam and Tesco, boards dominated by independent directors did not carry out their responsibilities, though they were all eminent personalities. 'Fit and Proper' test criterion was the basis of selection or nomination of independent directors in some companies. In developing and emerging countries, the scenario has been somewhat different. In majority of cases, independent directors inducted in the boards of companies were handpicked and they were either friends or relatives of the promoters and frequently they fell into line with the promoters.

Independent directors on the board of stock market listed companies are regarded as indispensible part of corporate governance norms. The concept of independent directors was applied spontaneously in 1950s in the USA as a measure of good governance which was later made compulsory by law. In UK, the requirement for board independence was acknowledged in 1992 in the Cadbury Report on corporate governance, captioned “Financial Aspects of Corporate Governance.” Many other countries adopted such governance principles including the arrangement of independent directors. But what was lacking was clarity on the responsibilities and duties of the independent directors. Even where independent directors sought to function in the interest of the various stakeholders, particularly the shareholders, they had little leeway to interact with the shareholders. Generally, independent directors are drafted into boards to serve the interest of the shareholders, to be specific, non-promoter shareholders. The independent directors, forming majority on the boards, find themselves in advantageous positions to play forceful roles in making sure that financial statements and other documents are factual, unbiased and free of distortions.

2. It is also not distinctively defined if the independent directors are entrusted to be in advisory capacity or monitoring capacity. Under the present scenario, many such directors are content with advisory role, though ideally, they need to assume monitoring responsibility. Even if monitoring activities are imposed on them, it may be unrealistic to expect them to take up the role of watchdog due to the looming apprehension of collision with the promoters i.e. controlling shareholders.
3. By and large, independent directors (IDs) who are appointed or nominated are not required to hold any share and as such, they are undone if any agenda is put to vote. One could suggest ‘selective veto’ power for such directors but this is not tenable as this would create chaos.
4. There has also been large number of situations where independent directors did not have regular access to the financial documents and other papers. Sometimes, they faced hindrances in interacting with the audit committee and the Chief Financial Officer. By their very nature, IDs cannot pay attention to, and track, day-to-day affairs of the company; they have to rely on the information and support given by the management. It would appear that the relationship between the management

and IDs is a grey area. The success of the corporate governance drive depends, to a great extent, on how much and how far a company's management and inside directors support the IDs.

Many companies, specifically commercial banks, investment banks, and various other financial institutions commonly have to assume different types of risks – some carry high risk while some others carry low risk.

5. The question of whether the independent directors should be full-time or part-time members of the board also posed challenges. There appears to be strong ground for independent directors to be part-time. It is argued by many that provision for full-time independent directors may lead to undesirable interference to the detriment of smooth functioning of company affairs. Majority of part-time independent directors with more powers and responsibilities is considered more realistic and fruitful. Another important area of growing concern was the time devoted by the independent directors in the affairs of the relevant board.
6. Non-availability of sufficient number of competent independent directors, notably for banks and other financial institutions, is yet another challenge. Many suitable persons have been found hesitant to be directors for fear of undesirable events such as assuming liability and loss of reputation as a result of any malpractice or offence beyond their knowledge. A delicate issue has been the personal liabilities assigned to a director. Like an executive director, an ID has no direct stake in a company and is reluctant to shoulder any personal liability if such situation arises due to any wrongdoing. It has been observed that IDs are worried about their personal liability. The reason may be risk of personal assets and tarnishing of their reputation and status. A survey by Ernst and Young, one of the top audit firms unveil that globally 76% of directors are uneasy about their personal liabilities. This phenomenon tends to dissuade many eligible personalities to accept the offer of IDs.
7. The position and role of chairman of the board is perhaps the most delicate. Chairman of a board shoulder the crucial responsibility of ensuring competency of the board for proper governance. It is customary, at least in developing countries, that the chairman belong to the promoter's group. As a consequence, it has been observed that boards are unable to play their due role in facilitating prudential governance practices.

8. Where the posts of chairman of the board and chief executive officer reside in the same person, the scope for conflict of interest may arise as a result of which governance practices tend to get diluted. Promoters who establish a company believe that they have the natural right to the chairmanship as well as to the post of managing director or chief executive officer (CEO) as many of the companies are set up with family oriented structure. Companies in developing countries display ownership concentration. The history of corporate structure shows that promoters are recalcitrant to let go the post of chairman or CEO even after going public. The idea to separate chairmanship and CEO, i.e. the dispersion of authorities of chairman and CEO, was mooted to diminish the undue influence of promoter chairman. But mere separation was not sufficient to affirm desirable governance. In a large number of occasions; CEOs demonstrated more loyalty to the promoter chairman even where they were given independence to run affairs of companies on their own to uphold the interest of other stakeholders than the promoters.
9. The increasing technical complexity of financial innovations leading to opaque and complicated financial instruments in the recent times has added a new dimension as IDs now have to grapple with risk analysis demanding new skills. Innovation in the financial services industry in the developed markets is essentially a redistribution of the risk. What this implies are those IDs had to keep abreast of all such developments at all times warranting diligence and deft attention. Under this scenario, attracting competent IDs in the financial services industry has turned out to be arduous.
10. There have been deliberations on the appropriate level of incentives to get the IDs involved in the desired manner. If IDs are paid small remuneration, they may not be keen to play a forceful role and remain indifferent to important decisions. On the other hand, if they are paid substantial remuneration, their independent position may sometimes be compromised. This thus is a hairline balancing act. But the issue is likely to dominate governance debate for some time.

It is common place that no reforms would see ultimate success without the spontaneous participation of the management and the owners. Here it is imperative that they change their conservative mindset and treat compliance incorporate governance as generating benefits through creating protection against legal and reputational damages and through better access to finances and greater investor acceptability.

11. In the recent times, IDs have been in the limelight for their allegedly passive and indifferent roles and aloo attitude. IDs do not appear to have been successful in bringing about any perceptible change in governance for one or combination of the circumstances cited above.

9. Expertise is not Enough

There is now general impression that just 'experts' 'academics' or 'professional' is not sufficient condition and attributes for IDs. The recent examples of failure of IDs to detect malpractices have given rise to the concept that IDs must possess 'domain knowledge' i.e. IDs must have accumulated expertise in particular or specific subject to be assertive and effective. Apart from 'Whistle Blower', ombudsman may also be appointed for better governance. Further, IDs must be inquisitive. In case of financial institutions, Chief Risk Officer (CRO) may be hired who will continuously be in touch with IDs on the risk elements in financial products. Presence of all IDs, if they are available, must be ensured that their views and opinion are recorded.

10. Audit Committees Responsibilities and Hindrances

Another important element of corporate governance is the audit committee which in most cases is dominated by the independent directors. The audit committee has to rely mostly on the financial statements and information furnished by the Chief Financial Officer (CFO) and other relevant officials as well as by the statutory external auditors. The effectiveness of the audit committee hinges largely on the regular communication, dialogue and liaison between the CFO and the statutory auditors. But this is often not the case in the developing countries. Although at present, the audit committees have the final say on the appointment of CFOs in most countries in many instances but functionally, they are more aligned with the executives including the CEO and MD.

The discussion on audit committee inevitably sheds more light on internal audit process and its effectiveness. It has now become an essential function of the audit committee to lay down the principles and procedures for an independent, objective and competent internal audit function which is indispensible for an audit committee's proper performance. In order to realize this target, audit committee must make sure that internal audit procedures generate output of the highest quality and standard. This aspect becomes more significant as companies venture into new areas of business, sometimes entailing higher risk and handle complicated products and services and acquire businesses of different nature. This implies that internal auditors have to continuously equip themselves with sophisticated technical and policy skills necessitated by new developments. This further requires that internal audit process must be clearly defined without any ambiguity so that any emerging loopholes can be instantly detected.

For financial services providers, internal audit process must be sufficiently risk-focused. Whenever a new product or service with unfamiliar risk is launched for the investors, internal auditors should alert the concerned officials about the true nature of risk along with potential conflict of interest, highlighting the consequences. The audit committee should be well to engage the internal auditor(s) to ensure that all the required risk identification and risk mitigation tools and systems are firmly in place. At the same time it is imperative that the internal auditors are completely and fully independent and have the firmness to withstand pressure, if any. Any sort of interference with internal auditors' independence must be dispensed with by the audit committee.

11. Product Diversity with Technological Boom and Risks

With the increasing diversity and complexity of financial products and services and rapid expansion of this industry, dependence on outsourcing and technology has gone up many-fold. These aspects have created additional sources of risk in the form of fiduciary and privacy risks and information leakage risks.

Further, surge in e-business and e-commerce has generated cyber security risk. The world has already witnessed a number of cybercrimes and cyber security breaches. Such events have long-term repercussions because hackers may gain access to a string of confidential records and proprietary data and information causing colossal damages. Although technological developments have taken place, it has lagged behind the tremendous explosion in volume of data, connectivity, transactions and communications in a short span of time. Unimaginable speed of data transfers and data up loading and down loading have made it very difficult to locate security breaches soon enough to take remedial actions at just times. Phenomenal growth in social networking, large data, cloud-computing, mobile internet have been generating personal data streams have made authorization and message filtration extremely hard. But formal cyber security control system and standards in these areas have not yet been introduced to the extent necessary. Cyber security management reform cannot be over-emphasized and internal auditors have to build the skills and expertise to this new challenge.

12. Information Quality and Transparency for Good Governance

One of the basic tenets of corporate governance is unwavering and continuous progress in the areas of disclosure and transparency to bolster confidence of all stakeholders, notably shareholders and creditors. Improvements in accounting standards are most vital and wide ranging reforms have been adopted in this regard world-wide. Equally necessary is the availability of sufficient, reliable and quality information as well as the integrity of the information provided which are pre-requisite for fair and credible disclosure and transparency. The fact that a number of big accounting scandals occurred in the past few years despite visible governance reforms is partly attributed to poor, sometimes distorted, information and withholding critical information on the plea of proprietary privilege. There is growing endorsement for the suggestion that for large, important companies and for financial institutions, particularly for listed ones, the scope of proprietary information should be very limited and that components of publicly available information should be expanded further.

The raging debate on remaking the corporate governance guidelines and principles has inevitably affected the accounting business. In some parts of the world, accounting firms have spun off the businesses of consultancy and internal audit businesses. For example, auditors are not allowed to take up any consultancy or advisory services in the same company to preempt conflict of interests.

Emerging and developing markets present a somewhat different dimension. Global investors perceive these markets as promising and lucrative. But they also view poor governance in these markets as a major limitation. Many large Foreign Institutional Investors (FIIs) apprehend that lax governance in emerging and developing markets may outweigh the rewards. Some FIIs are actively considering integrating corporate governance into the credit analysis and equity valuation. Overall, however, the question of recognizing Environmental, Social and Governance (EGS) factors in investment analysis has been gaining increasing support. Rating agencies may also assign higher rating to companies with sound and proper governance practices. Well governed companies may attain better and greater access to finance.

Global trends in corporate governance – a study by KPMG, the globally reputed audit firm, of twenty five (25) markets revealed that UK, USA and Singapore were the highest ranked markets in 2014. The study took into account corporate governance requirements in terms of clarity, degree of enforcement and number and types of instruments used. Australia, India and Malaysia jointly secured fourth position while Russia and Hong Kong were placed in the fifth position. Brazil and Taiwan were in the top ten rankings. China, Canada, Japan, Philippines, Indonesia were among the lowest ranked countries. It is worth mentioning that six out top ten ranked markets are in developed countries, apparently implying that financial deepening and maturity of the economy reinforce the need for well-defined and comprehensive corporate governance practices.

13. Corporate Governance in Bangladesh

The issue of corporate governance in Bangladesh is relatively new. This situation is not peculiar as the stock market does not have a long history. But progress in adoption of corporate governance is commendable, given the short history of industrialization and stock market. The Bangladesh Securities and Exchange Commission (BSEC) issued a comprehensive corporate governance guideline in February, 2006 for the listed companies. These guidelines were based on 'comply or explain'.

13.1 Arrival of New Corporate Governance Guideline

In August 2012, BSEC promulgated revised corporate governance guidelines on 'comply' basis. This was a bold step in the right direction at the right time. All the guidelines are pertinent and seek to ensure governance in the desired manner. Some of the critical guidelines are mentioned.

Separation of the posts of Chairman of board and Chief Executive Officer (CEO) – The guidelines stipulate that the positions of Board Chairman and CEO shall be occupied by different persons. The board will precisely determine the respective roles and responsibilities of board Chairman and CEO.

13.1.1 Appointment of Independent Director

At least one fifth of the total number of directors in a company's board should be independent directors. The definition of IDs effectively excludes family members and close relations and persons deeply connected with the promoters to become IDs.

Appropriate and fitting qualifications and eligibility norms for IDs have been spelt out.

13.1.2 Guideline for Audit Committee Composition

The guidelines provide guidance for formation of Audit Committee as a sub-committee of the Board of Directors of a company. The members of this committee, at least three (3) in number, are to be appointed by the board from among its members and must include at least one (1) independent director. The Chairman of the committee will be an independent director of the committee to be appointed by the board. Additional conditions require that all directors of the committee must be 'financially literate' with at least one of them to have accounting or financial management experience.

Limitations on external auditors – With a view to averting conflict of interest, external/statutory auditors are prohibited from undertaking certain specific non-audit functions such as appraisal or valuation services, financial information services, book keeping and internal audit.

The guidelines also postulate that the board fixes the corresponding roles, duties and responsibilities of the Chief Financial Officer, Head of Internal Audit, and Company Secretary.

13.2 Directors' Obligation and Justification of New Guideline

The directors of a listed company are under obligation to state the status of compliance of corporate governance guidelines in the Directors' Report to the shareholders for Annual General Meeting.

BSEC's imposition of 'comply' basis instead of 'comply or explain' has been a very good decision.

Advocates of 'comply or explain' basis argue that this provision encourages innovation as new ideas and concepts are accommodated. But if 'comply or explain' is to be effective, companies must provide conscientious explanations for non-compliance and exhibit legitimate commitment to adopt best governance and take prompt steps to shift from 'explain' to 'comply'. Proponents of 'comply' basis contend that in 'comply' or 'explain' context, explanations given are often superficial and do not provide clear justification of how the alternative arrangements can attain the desired goal. At the same time, it is also true that abuse of financial innovation leading to unbridled issue of opaque and complex financial instruments and services have created the recent financial crisis and as such, the rationale of 'comply' or 'explain' is solid. It is also claimed that 'explain' adversely affect market perception as stakeholders view this with suspicion. It has been observed that some companies regime to avoid improvements to their corporate governance practices. They made these observations offer various weak explanations on different occasions, thus delaying adoption of best governance practices, taking undue advantage of the 'comply or explain' basis. Two governance specialists, Yan Luo and Steven E. Salterio in an article titled "Quality in a 'comply or explain' disclosure regime" (Corporate Governance: An International Review, November 2014) suggested that firms (companies) in a 'comply or explain' regime are not employing, on average, the discretion permitted by such a study on corporate governance practices on Canada's forty seven (47) best practices aspect.

BSEC has also introduced guidelines for proper dissemination of price sensitive information and transparency and fairness of financial statements. Pricing of Initial Public Offering (IPO) and other follow on offerings have been made more market-conducive and investor friendly. This move to 'comply' basis is most likely to prevail on the listed companies to put emphasis on complying with the corporate governance guidelines.

It is reassuring to notice that the listed companies in Bangladesh are gradually implementing the corporate governance guidelines. BSEC has also been keeping a vigil on compliance of the guidelines. Some companies have already been brought to task for failing to comply with these guidelines.

14. Conclusion

Trends and patterns in an economy, particularly in financial market is open-ended. Accordingly, reforms and improvement in corporate governance is an on-going endeavour. Regulators and policy makers must be constantly alert and argus-eyed to adopt suitable decisions to respond to new developments.

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Seigniorage Income and Profit Paid to Government: A Case Study of Bangladesh Bank

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Abstract This paper presents a conceptual overview of seigniorage income of Bangladesh Bank (BB) which is ultimately paid to the Government of Bangladesh as part of its operational profit. Yearly net seigniorage income from currency in circulation and its share to the BB's operational profit are measured. The major part of BB's operational profit originates from income on investment in foreign currencies and earnings from government securities and a significant part of BB's operational profit comes from seigniorage income. During FY 2007 to FY 2011, seigniorage income from the stock of currency in circulation as percentage of BB's total operational profits varied from 38.03 per cent to 56.43 per cent; while on an average it was only 47.20 per cent of its total profits. But, if we consider the yearly flow of BB's currency in circulation and its earnings of a particular year deducting from yearly total management costs of currency in circulation, then seigniorage income would be negative during FY 2007 to FY 2011 except the FY 2008 when investment in foreign currencies through balance held outside Bangladesh have significantly contributed to increase seigniorage income in the operational profit.

Keywords Seigniorage Income, Notes in Circulation, Operational Profit, Government Security, Foreign Currency.

1. Introduction

The profits earned from issuing notes and coins are known as seigniorage. There are two basic approaches to measuring seigniorage.

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The first one is known as *cash flow* approach where the face value of the increase in the stock of currencies is deducted from the total costs of its production and management. The second and the more preferred approach to measuring seigniorage from currency issue is known as *accrual* or *liability* approach which measures the cash flow of income from the assets held by the issuer as a result of currency issue (less production and management costs). Seigniorage is included in the central bank's overall operational profits and paid to the Government. The basic purpose of this paper is to estimate the amount of seigniorage income of Bangladesh Bank and determine its share in the total profits which are paid to the Government. To this end, the paper will analyse assets composition against notes in circulation, composition of income and costs related to notes in circulation and calculate net seigniorage income payable to the Government for a particular year by deducting aggregate of all costs from aggregate of income from all components.

2. Assets against Notes in Circulation

The notes in circulation are liabilities for the central banks, fully backed by assets comprising of holdings in gold, silver, foreign currencies, government securities, coins and other loans and advances. The average assets composition against notes in circulation from FY07 to FY11 is shown in Table 1. It can be seen that investment in foreign currencies through balance held outside Bangladesh and investment in government

Table 1: Assets Composition Against Notes in Circulation (average)

(BDT in million)

Items	FY07	FY08	FY09	FY10	FY11
1. Gold & Silver	5070.20	4599.20	4017.20	4687.90	6220.30
Gold	4919.40	4409.70	3820.50	4481.30	5867.60
Silver	150.80	189.50	196.70	206.60	352.70
2. Balance held outside Bangladesh	80000.00	100000.00	137500.00	202500.00	325000.00
3. Bangladesh government securities	147488.50	181879.50	198091.50	203860.80	182428.40
4. Bangladesh coins	299.90	242.10	225.40	186.60	269.70
5. Other loans & advances	31445.30	31040.30	30960.30	33355.30	35400.30
Promissory notes	29879.40	29879.40	29879.40	29879.40	29879.40
Debenture	1565.90	1160.90	1080.90	3475.90	5520.90
6. Total Assets (1+...+5)	264303.90	317761.10	370794.40	444590.60	549318.70

Source: Accounts & Budgeting Department, BB.

securities are the key components of the assets against notes in circulation. Bangladesh Bank's earnings on these asset holdings constitute the gross amount of seigniorage income.

3. Income from Assets against Notes in Circulation

The lion share of Bangladesh Bank's income from the assets against notes in circulation comes from investment in government securities and foreign currencies. The average gross income from the assets against notes in circulation from FY07 to FY11 is shown in Table 2. It is observed that income from the balance held outside Bangladesh in foreign currencies have remarkably reduced in FY09 and FY10 due mainly to decrease of foreign rate of interest (for example, US treasury bond interest rate) in the pace of global financial crisis. Income from investment in government securities have declined in FY10 and FY11 due to cut in repo and reverse repo rates. Gains and losses from revaluations of gold and silver are transferred from retained earnings to revaluation reserve and purchase of coins from the Government Treasury does not generate any profit for Bangladesh Bank.

Table 2: Gross Income from Assets Against Notes in Circulation (average)

(BDT in million)

Items	FY07	FY08	FY09	FY10	FY11
1. Gold	-	-	-	-	-
2. Silver	-	-	-	-	-
3. Balance held outside Bangladesh	1695.00	3349.90	1570.70	1028.50	3794.00
4. Bangladesh government securities	10727.40	13234.00	12751.90	7487.60	7143.70
5. Bangladesh coins	-	-	-	-	-
6. Other loans & advances	1498.00	1189.00	1126.30	1173.00	1356.00
Promissory notes	1444.30	1131.00	1069.70	996.40	1093.70
Debenture	53.70	58.00	56.60	176.60	262.30
7. Total Income (1+...+6)	13920.40	17772.90	15448.90	9689.10	12293.70

Source: Accounts and Budgeting Department, BB.

4. Costs Related to Notes in Circulation

The total cost related to notes in circulation includes costs of production, transportation, preservation of bank notes, manpower engaged in managing notes in circulation, note replacement and other costs. The average cost related to notes in circulation from FY07 to FY11 is shown in Table 3. An influential component of cost is cost of note replacement which is calculated on the basis of life span of notes of different denominations. In Bangladesh, it is generally assumed that life span for 5 and 10 Taka notes are 3 years, for 20 and 50 Taka notes 4 years, for 100, 500 and 1000 Taka notes 7 years.

Table 3: Cost for Currency in Circulation (average)

(BDT in million)

Items	FY07	FY08	FY09	FY10	FY11
1. Cost of production of bank notes	2700.80	579.10	318.60	893.40	822.80
2. Cost of note transportation	21.30	16.20	17.00	27.40	31.10
3. Cost of note preservation	5.90	7.30	46.80	13.10	13.50
4. Cost of manpower for note circulation*	325.60	329.20	378.90	403.20	377.40
5. Cost of replacement	557.40	619.30	743.30	1076.00	1467.10
6. Other costs	6.20	6.00	6.80	8.90	11.10
7. Total cost (1+...+6)	3617.20	1557.10	1511.40	2422.00	2723.00

* The estimated cost of manpower includes the wages and salaries of personnel involved in notes and coins circulation.

Source: Accounts & Budgeting Department, BB and branch offices of BB.

5. Net Seigniorage Income from the Stock of Notes in Circulation

After deducting total cost relating to notes in circulation (calculated in Table 3) from the total income received from the assets against notes in circulation (calculated in Table 2), the seigniorage income of Bangladesh Bank from FY07 to FY11 is obtained as shown in Table 4.

Table 4: Net Seigniorage Income from Notes in Circulation in Bangladesh

(BDT in million)

Items	FY07	FY08	FY09	FY10	FY11
1. Total income from the assets related to notes in circulation	13920.40	17772.90	15448.90	9689.10	12293.70
2. Total cost related to notes in circulation	3617.20	1557.10	1511.40	2422.00	2723.00
3. Seigniorage income payable to Government (1-2)	10303.20	16215.80	13937.50	7267.10	9570.70

Source: Accounts & Budgeting Department, Head office and branch offices of Bangladesh Bank.

6. Comparison of Seigniorage Income with Bangladesh Bank's Operational Profit and Profit Transferred to the Government

As seigniorage income is included in Bangladesh Bank's total operational profit, it is pertinent to look into the extent it contributes to Bangladesh

Bank's total operational profit and to yearly profit transfers to the Government. Available data (Table 5) shows that Bangladesh Bank's operational profit remained higher than its seigniorage income in every year. The average seigniorage income of Bangladesh Bank from FY07 to FY11 was 47.20 per cent of its total operational profit and 64.09 per cent of total operational profit transferred to the Government. Thus the profits transferred to the Government were higher than the seigniorage income from FY07 to FY11 except FY10 which indicates that Bangladesh Bank not only pays Government from its seigniorage income source but also from other sources.

Table 5: Bangladesh Bank's Operational Profit and Seigniorage Income

(BDT in million)

Items	FY07	FY08	FY09	FY10	FY11	5-year Average
1. Total Operational Profit of Bangladesh Bank	26766.40	31528.30	25058.00	12878.20	25168.01	24279.80
2. Profit Transferred to Govt. Treasury	21931.60	27366.20	17327.50	6120.80	16655.30	17880.30
3. Seigniorage Income	10303.20	16215.80	13937.60	7267.10	9570.70	11458.90
as % of BB's operational Profit	384.90	514.30	556.20	564.30	380.30	472.00
as % of BB's profit transfer to Govt.	469.80	592.50	804.40	1187.30	574.60	640.90

Source: Accounts and Budgeting Department, BB and branch offices of BB.

However, if we calculate seigniorage income of Bangladesh Bank considering the yearly flow of (change in the stock) notes in circulation

Table 6: Seigniorage Income from the Yearly Flow of Notes in Circulation in Bangladesh

(BDT in million)

Items	FY07	FY08	FY09	FY10	FY11
1. Gold	-	-	-	-	-
2. Silver	-	-	-	-	-
3. Balance held outside Bangladesh	0.00	1340.00	399.80	482.50	1751.10
4. Bangladesh government securities	2884.00	2119.70	212.00	302.90	0.00
5. Bangladesh coins	-	-	-	-	-
6. Other loans & advances	0.00	8.00	0.00	259.70	0.00
Promissory notes	0.00	0.00	0.00	0.00	0.00
Debenture	0.00	0.80	0.00	259.70	0.00
7. Total Income (1+...+6)	2884.00	3467.70	611.80	1045.10	1751.10
8. Total Cost	3617.20	1557.20	1511.30	2422.00	2723.00
9. Payable to Govt. as Seigniorage (7-8)	-733.20	1910.50	-899.50	-1376.90	-971.90

Source: Accounts and Budgeting Department, BB.

and its earnings of a particular year deducting from yearly total costs then seigniorage income would be negative in every year except FY08 when investment in foreign currencies through balance held outside Bangladesh have significantly contributed to increase seigniorage income in operational profit of Bangladesh Bank (Table 6).

7. Concluding Remarks

Seigniorage income constitutes a significant part of Bangladesh Bank's operational profit, and its annual profit transfers to the Government exceeded the seigniorage income every year from FY07 to FY11, except FY10. Although we have not calculated seigniorage income for the last three fiscal years, it is expecteded that the trend of the seigniorage income would apparently be the same. Moreover, a lion share of profit transferred to the Government comes from the seigniorage income. Hence, we need to investigate the relationship among seigniorage income and other macroeconomic variables such as money supply, inflation etc. for better understanding of the linkages and making our monetary policy decisions in a much more prudent way.

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Performance of Banking Sector in Bangladesh

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Abstract The study attempts to appreciate the performance of Bangladesh's Banking Sector by examining various bank operations or activities. Most of the key indicators of bank activities — total asset, deposit, loans and advances, capital adequacy etc. — show upward trend. In particular, non-performing loans, which are quite high is declining and capital adequacy ratio is increasing, showing stronger resilience capacity of the banks. However, there is some concern as regards the declining trend of the rate of return on equity. State Owned Commercial Banks and Specialized Banks are the main drivers to the lackluster performance of some indicators. It is important to address the problems of these banks.

Keywords Classified Loan, Capital Adequacy, Financial Inclusion, Inclusive Growth, Loans and Advances.

1. Introduction

Bangladesh has a mixed banking system comprising of nationalized, private and foreign commercial banks and a number of specialized banks with Bangladesh Bank as the central bank of the country. Banks are the principal conduits in all countries for transferring the resources of those who save to those who invest the savings. By dint of this function, banks increase velocity of money, generate employment, plays a pivotal role in the operation of export, import, foreign remittances and enhance economic growth. The banking sector of Bangladesh has come a long way to play its due role to promote economic growth and development.

At present, a total of 56 banks are operating through their 8794 branches at home and abroad. Among them, there are 4 state-owned commercial banks (SCBs), 4 government owned specialized development financial institutions (banks) (DFIs), 39 domestic private commercial banks (PCBs), and 9 foreign commercial banks (FCBs). It is important to see how the banks perform in various aspects of their operations

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and how their operations leave their mark on the macroeconomy of Bangladesh.

2. Objective and Methodology

The objective of this paper is to appreciate the performance of the banking sector in Bangladesh. The performance of banks is assessed through looking into what is happening to vital banking indicators and some related macroeconomic indicators of which include:

- capital adequacy ratio;
- classified loans;
- bad loans;
- return on asset and equity etc.;
- investment;
- export and import;
- foreign currency reserve.

3. Performance

As already mentioned, performance indicators have been looked into by considering banking indicators and bank-activity-related macro-economic indicators. This section deals with banking indicators.

3.1 Structure

As a prelude to examining the bank performance it is advisable to see the structural condition of the banking sector. The relevant information is given in Table 1.

Table 1: Banking System Structure as on 30 June, 2014

Particulars	SCB	DFI	PCB	FCB	Total
No. of banks	4 (7.1)	4 (7.1)	39 (69.6)	9 (16.9)	56 (100.0)
No. of branches	3,536 (40.2)	1,496 (17.0)	3,692 (42.0)	70 (0.8)	8,794 (100.0)
No. of employees	56,735 (33.2)	17,275 (10.1)	93,376 (54.7)	3,338 (2.0)	170,724 (100.0)
		BDT in billion			
Deposit	1,714.50 (26.1)	340.00 (5.2)	4,176.20 (63.7)	328.00 (5.0)	6,558.70 (100.0)
Loans & Advances	848.85 (17.8)	333.68 (7.0)	3,361.84 (70.4)	229.99 (4.8)	4,774.36 (100.0)
Total Assets	2,292.90 (26.5)	471.80 (5.4)	5,392.70 (62.3)	499.80 (5.8)	8,657.20 (100.0)

Source: Annual Report of Bangladesh Bank 2013-2014.

Note: Figures in parentheses are percentage in total.

Although only 4 in number, the state-owned commercial banks stand second in respect of number of branches, employees, amount of deposit, loans and advances and assets. Percentage-wise these are respectively 40.2%, 33.2%, 26.1%, 17.8% and 26.5%. The development financial institutions are also 4 in number, but their significance to the banking sector activities is much lower. The foreign commercial banks are more than double in number respectively than the state-owned commercial banks and development financial institutions, but they are the smallest in terms of their operations. The private commercial banks are numerous being 39 in number and they are at the top in terms of banking operations with 42%, 54.7%, 63.7%, 70.4% and 62.3% of branches, employees, deposit, loans and advances and total assets respectively. So then the operations of state-owned commercial banks and the private commercial banks hold more significance than the other categories of banks. It is worthwhile to note the financial development of the banking system represented by the annual growth of total assets, deposits and loans and advances. Both total assets and deposits register an annual growth of over 15% per annum during 2011-2014. Loans and advances, on the other hand, grew at an annual rate of 8.6% during the same period.

3.2 Loans and Advances

Loans and advances constitute the most important function of the banking system in consideration of their significance to business and the economy. Loans and advances demonstrated single-digit moderate growth as noted above. The quantity of this operation of the banking system can be gauged by referring to the recovery rate or the extent of classified loans. Information on classified loans are presented in Table 2 below.

Table 2: Classified Loan During 2007-2013

(figures in percentage)

Year	Classified to Total Loans	Sub-standard to Classified Loans	Doubtful to Classified Loans	Bad to Classified Loans
2007	13.2	9.8	7.5	82.7
2008	10.8	9.4	9.4	81.1
2009	9.2	12.2	8.4	79.4
2010	7.1	13.4	8.4	78.1
2011	6.2	14.8	11.5	73.8
2012	10.0	19.1	14.2	66.7
2013	8.9	11.2	10.1	78.7

Source: Financial Stability Report 2013.

Classified loans and advances as percentage of total loan, has dropped from a two-digit figure of 13.2 in 2007 to a single-digit figure of 8.9 in 2013 with some fluctuations in between 2007 and 2013. However, it is of concern that quality of the classified loan has been on the decrease. Both the substandard and doubtful loans ratios are increasing and for sometimes they have persistently been remaining at double-digit figures. Coming to bad loans, the ratio has fallen a little from over 82.7% but it is still near about 80% with 78.7% in 2013.

3.3 Capital Adequacy

Adequate capital serves two objectives: it profits depositors' interest and ensures the survival of bank business. It is measured by capital adequacy ratio (CAR) by referring it to risk-weighted assets (RWA). Bangladesh Bank has set the minimum requirement of 10% of the ratio or BDT 4,000 million whichever is higher. The CARs of various categories of banks and the overall banking system are presented in Table 3.

Table 3: Capital Adequacy Ratio by Types of Banks

(figures in percentage)

Bank	2009	2010	2011	2012	2013	2014 (June)
SCBs	9.00	8.90	11.70	8.10	10.80	8.70
DFIs	0.40	-7.30	-4.50	-7.80	-9.70	-13.70
PCBs	12.10	10.10	11.50	11.40	12.60	12.10
FCBs	28.10	15.60	21.00	20.60	20.20	20.60
Total	11.60	9.30	11.40	10.50	11.50	10.70

Source: Annual Report of Bangladesh Bank 2013-2014.

Information in Table 3 shows that FCBs and PCBs demonstrate better performance than the other two categories of banks. They have been consistently maintaining more capital than the minimum requirement of 10% CAR set by the Bangladesh Bank. The SCBs and particularly DFIs laggard in this regard. Despite this the overall banking sector performance has been satisfactory with more than 10% capital adequacy ratio.

3.4 Productivity

Productivity is an important indicator of efficiency of banking operations. The structure of the banking sector with various categories of banks provide ample scope of competition among them. For measurement of productivity, deposit, loans and advances and total assets per employee per year has been employed. Table 4 provides the results.

Table 4: Deposit, Loans & Advances and Asset per Employee in 2014

(BDT in billion)

Particulars	Bank Types				
	SCB	DFI	PCB	FCB	Total
Deposit	0.03	0.02	0.04	0.10	.04
Loans & Advances	0.01	0.02	0.04	0.07	.03
Total Asset	0.04	0.03	0.06	0.15	.05

Source: Calculated from Bangladesh Bank— Annual Report 2014-15.

Productivity, measured by the service of employee, is higher for FCBs and PCBs. They seem to have been taking advantages of competition and financial sector environment to come out with higher per employee services of deposit, loans and advances and total assets. On the other hand, the public organizations— SCBs and the DFIs show lower productivity. One of the reasons of this is that the public banks and financial institutions had to provide additional social services and also had to be more attentive to equity and environmental issues. In this regard, the foreign and private banks should also pay more attention to social and environmental issues.

3.5 Profitability

Sustainability of an organisation including the banking sector generally depends on its ability to generate earnings as compared to its expenses and other relevant costs. In this context, rate of return on equity turns out to be an important indicator to gauge this ability. Table 5 below contents this information of the banks.

Table 5: Rate of Return on Equity During 2009-2014

Banks	Return on Equity					
	2009	2010	2011	2012	2013	2014(June)
SCBs	26.20	18.40	19.70	-11.90	10.90	-2.40
DFIs	-171.70	-3.20	-0.90	-1.10	5.80	-9.50
PCBs	21.00	20.90	15.70	10.20	9.80	8.40
FCBs	22.40	17.00	16.60	17.30	16.90	20.10
Total	21.70	21.00	17.00	8.20	11.00	8.40

Source: Annual Report of Bangladesh Bank 2013-2014, p. 40.

The overall banking system provides a declining rate of return from 21.7% in 2009 through 17.0% in 2011 to 8.4% in 2014 (June). Although there has been some fluctuations with single digit rate of return in 2012 and in 2014 (June), the trend is still impressive. The marked fall in the rate of returns on equity in 2012 and in 2014 (June) are due to the negative performance of rate of returns on equity of SCBs and DFIs. The FCBs have registered high rates of the returns all through. However, the PCBs, the largest in number, have come out with a declining trend regarding the rate of return.

4. State Owned Commercial Banks and Financial Inclusion

Inclusive economic growth is one of the most important macroeconomic goals particularly of a developing country like Bangladesh. It is of special interest from the point of view of distributive as well as sustainability of growth. Financial inclusion constitutes an important device for the attainment of these goals. Most of the poor people of Bangladesh lack access to financial services i.e. they are excluded from formal banking services. High cost of banking services, lack of financial education, geographical inaccessibility and poor infrastructural facilities are the main hindrances for financial inclusion. On growth and equity grounds it is imperative to bring the unbanked people within the fold of services provided by the financial institutions.

Greater financial inclusion has been an important objective of Bangladesh Bank for which it recommends and urges commercial banks to have urban-rural ratio of 2:1 of bank branches. The state owned commercial banks are the main conduits to promote financial inclusion. Unlike the private commercial banks and the foreign commercial banks who mostly cater to the needs of urban people, the SCBs have about 50% of their branches in the rural areas in conformity with the recommendation of Bangladesh Bank. The SCBs also work for financial inclusion through some of their special programmes. Firstly, SCBs act as agents of government for implementing various *Welfare Programmes*. For example, they have 92 types of *Safety Net Programmes* which include distributing female student stipend, old-age pension funds and army pension funds, widow allowance etc. Secondly, agricultural loans which help financial inclusion by providing loans to the farmers constitute an important element of loaning policy of SCBs. Thirdly, the SCBs carry out the important function of financing *Food Procurement Programme* on behalf of the government and get paid the sum from the government later. Similarly, Savings Certificates which have an important source of financing *Deficit Budget* of government.

It can be reiterated that, if surplus funds are not channeled to those who have good investment opportunities, deserved productive investment will not take place. On the other hand, if surplus funds fall on wrong hands and unproductive investment takes place, resources will be squandered. The financial system, the brain of the economy, performs the much needed coordinating function of directing funds to where they can do the most good. It is a crucial path toward producing wealth. The financial system of Bangladesh can be said to have remarkably done this job by contributing particularly to growth of the economy's investment, export, import and remittance sectors. During the FY10, FY11, FY12 and FY13, investment grew at 24.47%, 25.2%, 26.5% and 26.8% respectively while remittances grew at 13.43%, 6.10%, 10.21% and 12.62%. As a result of combined effect of these macro-economic variables the economy's GDP grew, on an average, at the rate of about 6% per annum during this period.

5. Concluding Remarks

Banks being the principal conduits for transferring resources from the savers to those who invests the savings, plays an important role to conduct business in all the countries including Bangladesh. As such this study attempts to appreciate the performance of the banking sector of Bangladesh. Presently a total of fifty six banks — which include SCBs, DFIs, PCBs and FCBs — are operating in the country. Most of the key indicators representing various bank activities demonstrate healthy performance. Assets, deposits, loans and advances all demonstrate robust growth and there has been a declining trend of non-performing loan rate and rising trend of the capital adequacy ratio leading to increased resilience in respect of loan management of banks. Against this scenario, lackluster performance has been experienced in the field of rate of return on equity. Finally, private banks, domestic and foreign, are better performers than public banks and financial institutions. Public pressure and management problems are the main constraints of the SCBs. However, if cost-benefit analysis of the activities including the welfare programmes of the SCBs were undertaken, the benefits would have far outweighed the costs.

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A Review of Green Practices of Banks in Bangladesh

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Abstract An increasing number of banks around the world are going green by offering innovative green products, saving resources and supporting the activities that help conserve environment. A green bank is expected to use its resources with responsibility avoiding waste and giving priority to environment and society. Such public concern and expectation have grown significantly over last few years mainly due to apparently weather patterns, rising greenhouse gases, and declining air quality that have started affecting economic and social lives remarkably. Today, society demands that economic units and businesses take responsibility for safeguarding the environment. In Bangladesh, Bangladesh Bank has been helping government in implementing the provisions of key environmental regulations related to the financial sector and from time to time it has been issuing environment related circulars and guidelines. The paper is about reviewing the green banking practices of the country. It is observed that some notable positive changes have taken place in respect to green banking practices.

Keywords Green Products, Energy Saving, Green Banking Policy, Environmental Concern, Environmental Risks, Saving Scarce Resources.

1. Introduction

The environmental concern among the public has been gaining momentum in the face of unusual weather pattern, rising greenhouse gases and declining air quality etc. Consequently, societal demand for safeguarding the planet through responsible business is mounting. Banks hold a unique position to affect businesses activities through their financial role. Green banks do not only improve their own standards but also affect socially responsible behaviour of other businesses.

An increasing number of banks around the world are going green by offering innovative green products, saving resources and supporting

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the activities that help conserve environment. 'Conserving Environment' through operation and financing is at the centre of Green Banking (GB) activities of a bank. A green bank is expected to use its resources with responsibility avoiding waste and giving priority to environment and society. Such public concern and expectation have grown significantly over last few years mainly due to apparently unusual weather patterns, rising greenhouse gases, and declining air quality that have started affecting economic and social lives remarkably. Today, society demands that economic units and businesses take responsibility for safeguarding the environment. And some production units, business entities, and financial institutions have responded significantly to the demand and expectation of the society.

Bangladesh Bank (BB) has been helping government in implementing the provisions of key environmental regulations related to the financial sector and from time to time it (BB) has been issuing environment related circulars and guidelines. Especially, the circular on 'Policy Guidelines for GB' in 2011 is a remarkable step on the way to developing green banking practices in the financial sector of Bangladesh. Available published information indicates positive responses on the part of banks to the BB's initiatives.

Against the above background, the paper attempts to review and examine green banking activities to identify the issues and areas that require attention of the policy makers and banks to enhance green banking practices in the country. The specific objectives of the paper are: (i) to review Green Banking policy initiatives of Bangladesh Bank and role of other stakeholders in Bangladesh; and (ii) to examine the green banking practices of banks in the country. The paper is based on the secondary information. Published BIBM studies and BB information are the main sources.

2. Conceptual Aspects of the Green Banking Practices

In economic theory, the environmental issues have been linked with the concepts of market failure-public goods and externalities. The concepts of externalities and public goods, once produced can be consumed by an additional consumer at no additional cost, are closely associated. The Global Public Goods (GPGs) having negative impacts is known as Global Public Bads (GPBs). The results of the global pollutions and emissions like global warming, contamination, disruption of eco-systems etc. are GPBs. The negative externalities and GPBs are the burdens of the entire society. Banks contribute both directly and indirectly in this process. A bank is a consumer and a producer by itself and also support producers and consumers through its financing services.

It is recognized that green banking is one of the global initiatives by the stakeholders to save environment. The efforts are expected to bring positive changes in the environment, which are mostly non-excludable and non-rival in nature. Generally, a section of the society directly and the entire society indirectly is the beneficiary of the 'external benefits' offered by banks.

To offer effective GB practices, banks require supports of other stakeholders. The major stakeholders include International Financial Institutions (IFIs)/Inter Governmental Organizations (IGOs), government, central bank, media, environmental NGOs, business or production units and consumers. In the international arena, IGOs and IFIs have been contributing in framing international policy architecture that enables countries and stakeholders to better anticipate and respond to environmental initiatives. In the respect, Kyoto Protocol is a remarkable initiative that has been ratified by several industrialized and developing countries under which the members committed themselves to a reduction of four greenhouse gases.

A number of environmental NGOs and media (and other civil society and academic/research institutions) have been engaged as the watchdogs against financing dirty companies. Practically, these NGOs and media are the pressure groups. For example, Green America and a group of media protested the plans of financing to build 11 new coal-fired plants in Texus by some USA mega-banks in 2007, which helped stopping 8 of the 11 plants (Habib, 2011). As independent agencies, these stakeholders could play remarkable roles by offering both positive and negative incentives to the banks. Some environmental NGOs are also engaged in formulating guidelines and principles for the banking and financial sector. There are important international standards and principles relevant for different environmentally sensitive sectors prepared by international organizations and NGOs.

The voluntary initiatives of business firms (the main clients of banks) have been working as a complement to the regulatory approaches and are crucial incentives to the green banks. Business clients could perform role as a vehicle for green marketing for a green bank. Consumers can also offer market incentives to the banks by supporting the green activities of banks and by paying premium.

Broadly, GB constitutes of five pillars. First one is related to the 'green vision' of a bank. It is the basic principle. Practically, activities and operations of banks cannot completely discard environ-mental harm. In most cases, it is about minimizing harm. Second and third pillars are connected with banks' in-house activities and operation and financing. These are connected with a bank's green efforts to minimize environmental risks and saving scarce resources. Fourth pillar is concerned with supporting other stakeholders and cooperation. The growing environmental concern has brought about a new era of communication and cooperation between the businesses, banks and the NGOs worldwide. Banks may also engage NGOs for educating consumers and businesses. In USA some organizations are engaged in educating consumers and businesses about the positive environmental impact of choosing electronic bills, statements and payments over paper. Pillar five is about green reporting. Transparency of a green bank is a crucial component in its sustainable operation. It is concerned with providing relevant information and responses of the stakeholders on the activities of banks. All these pillars are integrated and crucial to ensure sustainable green banking.

In line with the Polluters Pay Principle, the polluting banks have greater environmental responsibility than that of others. Forcing polluter banks to bear the costs of their activities is also said to enhance economic efficiency. Appropriately applied, policies based on a Polluter Pays Principle can protect the environment without sacrificing the efficiency of a system.

Evaluation and monitoring arrangement should be in place for supporting ongoing green banking practices. There should be framework under which central bank should monitor the performance of banks using selected indicators on continuous basis. Reporting arrangement and disclosure is part of the framework. In evaluating the performance, all environmental impacts (negative, negligible, or positive) of financing activities of banks should receive due attention.

Green financing may not always be attractive to the policy makers in a developing economy when the economy is burdened with severe problems like poverty and unemployment. Developing countries may not afford to discard all economic activities and technologies immediately that are environmentally hazardous. Performing an assessment of the costs and benefits is required before enforcement of any environmental legislation/rules. Costs should be expressed in terms of relevant opportunity costs. Especially developing countries having huge resource constraints cannot ignore the opportunity costs of job loss, price rise, and other economic impacts.

3. A Review of the Policy and Regulatory Initiatives of Green Banking in Bangladesh

The awareness build up and environment conservation efforts started in Bangladesh mainly in 1980s when several developments took place particularly a separate Ministry called Ministry of Environment and

Forest (MoEF) and The Department of Environment (DoE) were established. To protect environment, government formulated Environmental Policy in 1992 and made commitments as signatory of a number of Multilateral Environmental Agreements like the Rio Conventions (RCs), i.e. United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD) and United Nations Convention to Combat Desertification (UNCCD). The Bangladesh Environment Conservation Act (ECA), 1995 is the umbrella act. Other notable regulations/rules/guiltiness include The Environmental Conservation Rules (ECR), 1997; The Environment Court Act, 2000; Environment Court (Amendment) Act, 2010; Bangladesh Environment Preservation (Amendment) Act, 2010 etc. The issue of climate change, waste management and wildlife protection received attention of the policy makers of Bangladesh in recent years. In order to utilize the resources of Climate Change Trust Fund in an effective and suitable manner, the Climate Change Trust Act, 2010 has been enacted. Moreover, in order to manage different waste in an environmentally and hygienically acceptable manner the Solid Waste Management Rules, 2011 and the Hazardous Waste and Ship Breaking Waste Management Rules, 2011 have been enacted recently. E-waste is another growing environmental concern of developing world including Bangladesh. In the adopted National ICT Policy, 2009, environment, climate and disaster management is identified as one of the ten objectives, which aims to ensure safe disposal of toxic wastes. Government has already prepared a draft National 3R Reduce, Reuse and Recycle strategy where e-waste issues have been addressed. To promote sustainable energy in the country, a Renewable Energy Policy has been prepared and various action plans have been undertaken with the target to generate 5 per cent and 10 per cent of total power production by 2015 and 2020 respectively. The government has also initiated to set up a Sustainable Energy Development Authority (SEDA) and has finalized Sustainable Energy Development Act, 2011.

ECA 1995 and ECR 1997 together provide a framework of environmental regulations related to the financing to the industry sector. According to the framework, 'no industrial unit or project shall be established or undertaken without obtaining environmental clearance from the Director General, DoE in the manner prescribed by the rules'. It is to be noted that the clearance from the DoE is one of the requirements for obtaining finance from commercial banks for the industrial units grouped under different categories of EIA. For the purpose of issuing the Environmental Clearance Certificate, the industrial unit and projects shall in consideration of their location and impact on the environment be classified into the following 4 categories: Green, Orange-A, Orange-B and Red. ECR 1997 prescribes various performance standards requirements that are both general and industry specific. Practically, the certification arrangement and prescribed standards are hardly effective in protecting environment from pollution by industrial units.

Bangladesh Bank has undertaken certain initiatives to help implement the relevant provisions of environment related acts enacted by the government of the country. In 1997, commercial banks of the country were asked by the central bank to undertake necessary steps for implementation of certain decisions in regard to environmental conservation and protection by the National Environment Committee. Banks of the country were asked to ensure that steps have been undertaken to control environmental pollution before financing a new project or providing working capital financing to the existing enterprises. A comprehensive guideline on Corporate Social Responsibility (CSR) has been issued by Bangladesh Bank where banks have been asked to concentrate hard on linking CSR at their highest corporate level for ingraining environmentally and socially responsible practices and engaging with borrowers in scrutiny of the environmental and social impacts. Bangladesh Bank has also been taking initiatives for the rehabilitation of cyclone and other natural disaster affected people of the country time to time. Moreover, banks were asked to undertake CSR activities in the areas of the affected people for their rehabilitation. Online banking, which is considered by many as the starting point of Green Banking, received due attention of the central bank. Banks have been brought under the purview of e-commerce with a view to providing the customers with online banking facilities covering payments of utility bills, money transfer and transactions in local currency through internet as well.

To promote environmental financing, banks have been advised to finance in solar energy, bio-gas plant, Effluent Treatment Plant (ETP) and Hybrid Hoffman Kiln (HHK) in brick field under refinance programme of BB. BB introduced BDT 2.0 billion refinance facilities in FY 10 against bank loans for investments in solar energy, biogas plants and ETPs in line with the government's plan to meet 5 per cent of the total demand for electricity from green energy by 2015 and 10 per cent by 2020. In its recent circular, BB has included more sectors under its green banking refinance scheme and increased credit limits for different sectors.

The policy is segregated into three phases. In Phase I, the banks were to develop green banking policies and show general commitment on environment through in-house performances by December 31, 2011.

Banks needed to formulate environmental policy and create a GB cell or unit under this phase. A high-powered committee be responsible for reviewing the banks' environmental policies, strategies and programmes. The banks were to allocate sufficient fund in their annual budget for GB; and are to introduce a green office guide for practicing internal environment management. The banks needed to take measures to save electricity, water and paper consumption as per the requirements. Energy saving bulbs should replace the regular ones in branches/offices of the banks and employees should be encouraged to purchase energy efficient cars. Banks are also to create a climate risk fund to finance the economic activities of flood, cyclone and drought prone areas at the regular interest rate without charging additional risk premium.

In Phase II of the Green Policy Guidelines that would not exceed December 31, 2012, the banks were to formulate specific policies for different environmentally sensitive sectors and determine a set of achievable targets and strategies, and disclose these in their annual reports and websites. They were expected to set up green branches and should increasingly rely on virtual meeting through video conferencing. The Phase III, which was to be attained by December 31, 2013, required banks to publish independent Green Annual Report following internationally accepted format like GRI with the arrangement of external verification. The time frame for implementing the three phases of GB Policy had been extended. Now the phase-I needed to be implemented within June 30, 2014. For the second and third phase the implementing periods were set at June 30, 2015 and December 31, 2015 respectively.

One relevant vulnerable area in Bangladesh is inadequate responses and awareness among consumers on the issue. Consumer awareness is still very low with limited market surveillance by consumer organizations. Generally, consumers are not found to be committed to improve their environment and may be looking to lay too much responsibility on industry and government. Considering income levels of the greater proportion of the country's people, it is also not easy to impose external cost of pollution directly on their shoulders.

4. Review of the Green Banking Practices of Banks

Green practices are generally seen as a part of CSR practices in the banking sector of Bangladesh. The CSR that includes mainly philanthropic activities of banks commonly cover education, health, disaster relief, sports, art and culture, environment etc. Expenditures on CSR have increased over the years. It is encouraging that overall CSR expenditures (that includes expenditure on environmental initiatives) of banks have increased significantly from BDT 226 million in 2007 to BDT

3047 million in 2012. Of these CSR allocation 4.6 per cent was allocated for environmental cause in 2012 (reduced from 6.3% of 2011).

In 2012, banks allocated BDT 104330 million for green banking and the utilization was 250 per cent higher than the allocated amount. This is mainly because of the figure of ‘green finance to the projects with ETP’ which is 260 per cent higher than the allocated figure (Table 1). In the case of other components, the situation is different. For Climate Risk Fund, the utilization was only 12 per cent of the total allocation; and for green marketing the utilization was 11 per cent of the total allocation.

Table 1: Status of Green Banking Allocation and Utilization of Fund

(BDT in million)

Bank Category	Budget Allocation				Budget Utilization			
	Green Finance	Climate Risk Fund	Green Marketing and Training	Total	Green Finance	Climate Risk Fund	Green Marketing and Training	Total
SCBs	5000	415	610	7185	6507	25	1.00	8970
SDBs	1350	430	20	1800	8205	00	0.04	8206
PCBs	56268	1283	57730	57730	178812	219	82.00	179113
FCBs	41713	17	37	41766	77398	15	7.00	77420
Total	104330	2145	846	108482	270922	259	90.00	271271

Source: Based on Bangladesh Bank (2012).

Bangladesh Bank’s initiatives have made significant changes in regard to the creation of green governance frameworks in commercial banks. A BIBM survey data reveal that as of August 2013, all banks have environmental policies and Green Banking Cells. Most of the policy documents are replications of Bangladesh Bank’s policy guidelines. A few banks have well designed and customized policy documents, however, some documents require fine tuning. About 75 per cent banks have formulated one or more sector specific environmental policy guideline.

In almost all banks, top level bank executives are responsible for heading the Green Banking Cell. The number of employees in the cell ranges from 3 to 10. Generally, employees are responsible with the activities of Green Banking Cell alongside other responsibilities. Of the sampled banks, 95 per cent have green office guide that have been circulated either through intra-net or in hard forms among the employees, as claimed from the GB cells. About 65 per cent banks have claimed that they have formulated some kind of green strategic planning.

Banks allocated BDT 2145 million in 2012 as climate risk fund of which BDT 259 million was utilized which is only 12 per cent (Table 1). Though all banks are supposed to create climate risk fund, the published data of BB indicate that 19 per cent banks have no allocation for the fund. Moreover, of all banks, 72 per cent have not utilized the fund in 2012. Of the banks, 6 per cent have no allocation for climate risk fund; however, have reported certain volumes as utilization. The survey team found confusions among bank executive over the use of climate risk fund. According to the BB policy document, the fund should mainly be used to cover additional risk premium and to meet emergency expenditure in the climate risk prone areas. The basic target, as appears in the policy documents, is to ensure regular financing. The fund could be created as part of CSR expenditure; however, it is obviously not simply about performing some philanthropic activities. As the BIBM survey team observed, the funds were mainly used for philanthropic activities like distribution of blankets, tubewells, solar panels, food and other relief activities. A few banks have also utilized the funds for green financing at reduced rate.

Introducing green office guide is a noticeable step; however, only a few banks have notable initiatives in regard to resource inventory preparation and savings of paper, water and power etc. Practically, a very limited number of banks are found to have provision of maintaining inventory of the resource use or consumption of energy and power. These are mainly maintained in terms of expenditure amount. To make it meaningful, it is important that these data should be maintained in terms of the use of units and should be expressed in relation to the attributes like number of employees, number of branches etc. Banks generally do not declare or strategize any target of the reduction of the resource use.

Table 2: Online Banking Activities of Banks

	Branches facilitated with Online banking	Accounts facilitated with Internet Banking	Accounts facilitated with SMS Banking
SCBs	5%	0.00%	0.01%
SBs	5.28%	0.00%	0.00%
PCBs	92.24%	2.62%	7.73%
FCBs	100%	35.71%	39.64%
Total	41.05%	1.22%	3.20%

Source: Bangladesh Bank, 2012.

Banks are generally aware of the necessity of adopting online banking to serve their customers. Over 41 per cent bank branches of the country have online banking facilities. Internet banking and SMS banking are mainly offered by FCBs and a few PCBs (Table 2). Over 95 per cent ATMs (out of around 5000 ATMs) in the country are owned by the PCBs. If the shared ATMs are considered, the number of ATMs of the banks would be over 50000. Other than some scattered initiatives, banks generally do not have specific strategies to popularize online statement to save papers.

Around 92 per cent banks of the country have some initiatives related to financing environment friendly projects or green financing. In 2012, banks disbursed BDT 270922 million as part of their green financing activities (Table 3). Financing to the 'project having ETP' constitutes 96 per cent of the total green financing. The other forms of green financing of FCBs and PCBs, in percentage terms, are much lower or insignificant. It is to be mentioned that financing to 'project having ETP' by the top 10 green banks (2012) constitute 95 per cent of their total green financing.

Table 3: Status of Green Financing by Banks in 2012

(BDT in millions)

Bank Category	ETP	Projects having ETP	Bio Gas/ Fertilizer	Solar/renewable energy plant	HHK	Others	Total
SCBs	119	2994	10	985	539	1861	6507
SDBs	387	6402	606	250	450	111	8205
PCBs	688	173188	284	1686	842	2090	178811
FCBs	163	76517	0	719	0	0	77398
Total	1357	259100	900	3638	1830	4062	270922

Source: Bangladesh Bank, 2012.

As of 2012, 72 per cent banks were using 43 per cent of refinance facilities offered by Bangladesh Bank. The volume of refinancing amount has increased by over three times in between 2011 and 2012. The change is remarkable. The facilities were availed for supporting ETP, solar, HHK and biogas. Some banks identified 'long processing time' and 'low spread' as obstacles for availing BB refinancing facilities.

There is no doubt that the BB's initiatives have brought remarkable change in terms of awareness and approach of banks. However, changes have taken place mainly at urban areas. More specifically, the awareness is Dhaka centric. The rural branches of most SCBs, SDBs, and PCBs are hardly aware of such concepts or activities of banks. Information on green activities by banks is sometimes not even disseminated in the urban branches/head offices.

Green marketing or promotional activities are yet to receive popularity in the banking community. Only 11 per cent of the allocated funds for green marketing and training were utilized by banks in 2012. A very limited number of training programmes were organized for the bank employees on green banking. According to the survey observation, on an average only 2 training programmes were organized per bank in 2012. However, it is encouraging that 4 per cent banks have organized training programmes for their customers for awareness development. In regard to bank-NGO linkages, there are very limited instances for green causes. About 52 per cent banks have NGO-linkage, however, only 12 per cent banks were found to have linkages with NGOs to promote green initiatives (Habib et al., 2013).

Though there are some scattered activities, generally banks do not have concrete waste management policies or strategies. Some banks have arrangements for waste collection, reuse and recycle of electronic goods and other materials and green tendering. However, a few banks have some inspiring initiatives for in-house waste management and financing. Growing e-waste has been another related problem for banks. Few corporate offices in Bangladesh have taken initiatives regarding their reuse of e-waste. Some are distributing computers to different schools and organizations for reuse. Among the banks surveyed, 15 per cent banks have arrangements with NGOs to distribute their used PCs to schools.

5. Concluding Remarks

The volume of green financing by banks have increased remarkably. This is mainly because of the high volume of financing in 'projects with ETP.' These projects may not be harmless if not extensively monitored and independently reviewed.

Almost all banks of the country have allocation for 'climate risk fund.' Currently, the funds are being used to perform some philanthropic activities. Some banks also have confusion regarding the true purpose of this fund. The published data reported by banks are inconsistent in a few cases. This points to the need of data validation mechanism and periodic review.

Bangladesh cannot afford to discourage all projects or economic activities only for environmental cause. Some negative impacts of economic activities on employment, income, and poverty cannot be ignored.

Development of environmentally responsible practices by banks or green banking is the result of a collective effort of all stakeholders. 'Consumer Awareness' is the area where Bangladesh needs to pay serious attention: This cannot be done without collective endeavor of government, media, NGOs and banks.

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Combating Money Laundering and Financing of Terrorism: Some International and National Initiatives

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Abstract Money Laundering and Financing of Terrorism are mutually reinforcing social and economic ills. Addressing these ailments need international and national cooperation. There are some international initiatives to look into and address the issues. Side by side, national initiative, in league with the international initiative are engaged to combat these undesirables. In Bangladesh, the Bangladesh Bank specifically look into the issues with the help of supervisory tools and actions in terms of penalizing the offending banks in various forms. Bangladesh Bank's efforts are reported to have produced some salutary effects on the flow of remittance and flow of remittance through legal channels.

Keywords Lorenz Curve, Gini Ratio, Herfindahl-Hirschman Index.

1. Money Laundering and Terrorist Financing: Concept and Motive

Money laundering, a multidimensional concept, is defined by the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances known as the Vienna Convention, and the United Nations Convention Against Transnational Organized Crime (2000) known as the Palermo Convention as:

- The conversion or transfer of property, knowing that such property is derived from any offense, e.g. drug trafficking, or offenses or from an act of participation in such offense or offenses, for the purpose of concealing or disguising the illicit origin of the property or of assisting any person who is involved in the commission of such an offense or offenses to evade the legal consequences of his actions;

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- The concealing or disguising the true nature, source, location, disposition, movement, rights with respect to, or ownership of property, knowing that such property is derived from an offense or offenses or from an act of participation in such an offense or offenses; and
- The acquisition, possession or use of property, knowing at the time of receipt that such property was derived from an offense or offenses or from an act of participation in such offense or offenses.

In Bangladesh money laundering is defined as knowingly moving, converting, or transferring proceeds of crime or property involved in an offence for the following purposes; concealing or disguising the illicit nature, source, location, ownership or control of the proceeds of crime; or assisting any person involved in the commission of the predicate offence to evade the legal consequences of such offence; smuggling money or property earned through legal or illegal means to a foreign country; knowingly transferring or remitting the proceeds of crime to a foreign country or remitting or bringing them into Bangladesh from a foreign country with the intention of hiding or disguising its illegal source; concluding or attempting to conclude financial transactions in such a manner so as to reporting requirement under this Act may be avoided; converting or moving or transferring property with the intention to instigate or assist for committing a predicate offence; acquiring, possessing or using any property, knowing that such property is the proceeds of a predicate offence; performing such activities so as to the illegal source of the proceeds of crime may be concealed or disguised; participating in, associating with, conspiring, attempting, abetting, instigate or counsel to commit any offences mentioned above.

The above definition is broader than that of the Vienna Convention and Palermo Conventions.

Terrorist financing is financial support, in any form, of terrorism or of those who encourage, plan, or engage in terrorism. The United Nation's International Convention for the Suppression of the Financing of Terrorism defines it as offence which if a person commits by any means, directly or indirectly, unlawfully and willingly, provides or collects funds with the intention that they should be used or in the knowledge that they are to be used, in full or in part, in order to carry out an act which constitutes an offence within the scope of and as defined in one of the treaties listed in the annex; any other act intended to cause death or serious bodily injury to a civilian, or to any other person not taking any active part in the hostilities in a situation of armed conflict, when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organization to do or to abstain from doing an act.

For an act to constitute the aforementioned offence, it is necessary that the funds were actually used to carry out the offense.

It should be mentioned that the meaning of terrorism is not universally accepted due to significant political, religious and national implications differing in various countries.

For Bangladesh, financing of terrorism means by a person or an entity refers to willful provision, receiving, collection or making arrangements for money, service or any other property, whether from legitimate or illegitimate source, by any means, directly or indirectly, with the intention that, it would, in full or in part, be used to carry out terrorist activity.

For looking at the linkage between money laundering and terrorist financing: One has to see the techniques used to launder money, they are essentially the same as those used to conceal the sources of, and uses for, terrorist financing. But funds used to support terrorism may originate from legitimate sources, criminal activities, or both. Nonetheless, disguising the source of terrorist financing, regardless of whether the source is of legitimate or illicit origin, is important. If the source can be concealed, it can be made available for future terrorist financing activities. Similarly, it is important for terrorists to conceal the use of the funds so that the financing activity goes undetected.

A significant difference between money laundering and terrorist financing is that the funds involved may originate from legitimate sources as well as criminal activities. Such legitimate sources may include donations or gifts of cash or other assets to organizations, such as foundations or charities that, in turn, are utilized to support terrorist activities or terrorist organizations.

Motives of money laundering are threefold: First, money represents the lifeblood of the organization that engages in criminal conduct for financial gain because it covers operating expenses, replenishes inventories, purchases the services of corrupt officials to escape detection and further the interests of the illegal enterprise, and pays for an extravagant lifestyle.

Second, a trail of money from offenses can become incriminating evidence. Criminals must obscure or hide the source of their wealth or alternatively disguise ownership or control to ensure that illicit proceeds are not used to prosecute them.

Third, the proceeds from crime often become the target of investigation and seizure. To shield ill-gotten gains from suspicion and protect them from seizure, criminals must conceal their existence or, alternatively, make them look legitimate.

2. Impacts of Money Laundering on Development

Criminals and terrorist succeed largely by concealing the origins or sources of their funds. Generally, money laundering is effected through national and international financial systems. While money laundering and the financing of terrorism have implications for any country, they have particularly significant economic and social consequences for a developing country like Bangladesh.

Money laundering and criminal activities including corruption go together. Facility of money laundering supports crime and corruption; crime and corruption are also supported by the availability of Money laundering facility. That is to say, money laundering and criminal activities are mutually reinforcing activities.

External resources, vital for fitting in resources constraints particularly of a developing country like Bangladesh, may be difficult to obtain because foreign financial institutions may decide to limit their transactions with countries regarded as money laundering havens, may subject transactions to extra scrutiny making them more expensive, or terminate correspondent or lending relationships altogether. Even legitimate businesses and enterprises from money laundering havens may suffer from reduced access to world markets or access at a higher cost due to extra scrutiny of their ownership, organization and control systems. Foreign direct investment and foreign aid are particularly examples of such external resources.

Image of business companies can be undermined because money launderers can use important companies to co-mingle the illicit funds with legitimate funds in order to hide the ill-gotten proceeds. Access to illicit funds allows these companies to subsidize their products and services. As a consequence, other enterprises find it difficult to compete with such companies. The process may end up with empowering money launderers to control various industries or sectors of the economy of certain countries. This unhealthy distortion of resource allocation has the implication of monetary and economic instability in the form of distortion of asset and commodity prices. It is also a vehicle for evading taxation depriving the country from revenue.

Money launderers, when powerful, can create obstacles to reform their economies through privatization. They may outbid legitimate purchasers of former state-owned enterprises.

Money laundering diminishes government tax revenue in many other ways. In trade based money laundering, under invoicing of import evade import duty; transfer pricing is to evade corporate taxes on profit; overpricing of export to get more cash incentives; all these activities indirectly harm honest taxpayers because it instigate drug traffickers, smugglers and other perpetrators to expand their operation. This drives up the cost of government due to the need for increased law enforcement and healthcare expenditure. Thus governments are obliged to collect more revenue the burden of which falls on the honest taxpayers.

3. Combating Money Laundering and Terrorist Financing

Combating money laundering and terrorist activities require efforts from national and international initiatives in this regard which are described below.

3.1 International Initiatives

Money laundering and terrorist financing take advantage of high speed international transfer mechanisms, developed technology such as wire transfers to accomplish their goals. For this, cross-border cooperation and coordination are needed to thwart the transnational efforts of money launderers and terrorists. The international initiatives in this regard began with the United Nations initiatives. The first of such initiative was on drug trafficking offence as the only predicate offence.

The G-7 countries embarked on a very important initiative with the establishment of the Financial Action Task Force (FATF) in 1987 to develop and promote international response to combat money laundering and terrorist financing. The FATE formulated international standards by setting general and special recommendations to combat money laundering and terrorism. The FATE also established tools for monitoring the implementation of the recommendations.

Another important initiative to combat money laundering and terrorism is the Basel Committee on Banking Supervision, Basel Committee, was formed in 1974 by the central bank governors of the Group of 10 countries. The committee has no formal international supervisory authority or force of law. Rather, it formulates broad supervisory standards and guidelines and recommends *best practices* on a wide range of bank supervisory issues. Apart from this, the Basel Committee, in its *core principles* included a principle for addressing money laundering issue.

In addition to these international organisations, there are some others dealing with money laundering and terrorism. One of these is the International Association of Insurance Supervisors (IAIS) established in 1994.

Another organization in this group is the International Organisation of Securities Commissioners (IOSCO), an organization of currently 105 countries, meant for having day-to-day responsibilities for securities regulation and the administration of securities laws in their respective countries has additionally a resolution to prevent money laundering. Like other international organizations of this type, IOSCO does not have law-making authority. Rather, it relies on its members to implement its recommendations within their respective countries.

The last initiative mentioned in this paper is the *Egmont Group of Financial Intelligence Units*, established in 1995 by a number of governmental units known today as Financial Intelligence Units (FIUs) formed the Egmont Group of FIUs, simply Egmont Group, named after the location of its first meeting at the Egmont-Adenberg Palace in Brussels, to provide a forum for FIUs to improve support for each of their national anti-money laundering programme. The support includes expanding and systematizing the exchange of financial intelligence information, improving expertise and capabilities of personnel, and fostering better communication among FIUs through technology and helping to develop FIUs worldwide.

3.2 National Initiatives

Recognizing the importance of combating money laundering and terrorism Bangladesh is putting efforts to deal with the issues by being member of Asia Pacific Group on Money Laundering (APG) and by remaining committed to implement FATF's recommendations. Bangladesh Bank has established a separate department named Anti Money Laundering Department (AMLD). To meet the international standards Bangladesh has Money Laundering Prevention Act enacted in 2012 repealing an earlier one.

Bangladesh Bank also has a Financial Intelligence Unit (FIU) for receiving, analyzing and disseminating suspicious transaction reports or suspicious activity report and cash transaction report.

In its efforts to combat terrorism and terrorist financing Bangladesh enacted Anti Terrorism Act (ATA) in 2009. To tighten the terrorist financing regime it is worthwhile to mention here that Bangladesh is the first non-FATF member country in the APG region that has criminalized proliferation financing in the legislation.

For Compliance Requirements on the part of the Banks in Bangladesh, based on Money Laundering Prevention Act (MLPA), 2012, Anti Terrorism Act (ATA), 2009 and circular or instructions issued by Bangladesh Financial Intelligence Unit has reporting variables and parameters on different aspects of the issues.

On top of various enactments and compliance parameters all banks and financial institutions have their own policy manuals to prevent money laundering and terrorist financing in conformity with international standard and laws and regulations in force in Bangladesh.

Bangladesh Bank Being the Apex Body of the Financial System Major supervisory powers by dint of which it is able to analyze or review information related to cash transactions and suspicious transactions received from any reporting organization and to collect additional information relating thereto for the purpose of analyzing or reviewing from the reporting organizations can issue an order to any reporting organization to suspend or freeze transactions of any account for any period.

In order to be an effective supervisory body and as guardian of the financial system it holds power to impose penalties of various kinds.

4. Conclusion

Money laundering and financing terrorist activities are mutually reinforcing. These are social ailments as well as economic ills. The advancement of IT technology, the availability and thereby use of high speed international transfer mechanism, use of wire transfer etc. have transformed these national problems into global issues.

Thus international cooperation and coordination efforts in unison with natural efforts are imperative to deal with these issues. Initiated by the United Nations, these initiatives of G-7 countries, Based Groups and Edmond Group etc. which emphasize different aspects relating to money laundering and financing terrorist activities. At home, Bangladesh Bank being the apex body of the financial system has same supervisory role regarding activities of the breaking institutions and power in terms of penalizing the offenders. These activities of Bangladesh Bank seem to have produced good results in terms of contributing to the flow of remittance and increased flow of remittances through legal channels instead of the much used ‘hundi’ method.

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Impact of Trade Liberalization on Output Growth in Bangladesh: An Empirical Investigation

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Abstract The positive role of international trade on economic growth has widely been discussed in the literature. Since its independence Bangladesh has experienced different trade regimes. In the initial years of independence Bangladesh adopted import substitution strategies under restricted economic framework. However, the bitter experience of such policies moved the economy towards greater openness through trade liberalization. The objective of this study has been to empirically examine the relationship between trade liberalization (openness) and economic growth in Bangladesh for the time period of 1982 to 2012. The standard time series econometric technique has been applied to determine the direction of causality between the considered variables. The test results indicate that both GDP and trade liberalization are integrated of order one and there is a stable long-run relationship between them. The results of the error correction model indicate the absence of causality between openness and economic growth in the short-run. This suggests that short-run variations in trade liberalization and income growth may be dominated by business cycle fluctuations with no clear causal pattern in the short-run. However, the evidence of bi-directional causality between trade liberalization and economic growth in the long-run indicates that both liberalization and economic growth reinforce each other in a longer term perspective.

Keywords Trade Liberalization, Co-integration, Granger Causality, Error Correction Models.

1. Introduction

The role of foreign trade on output growth has long been discussed in the theoretical and empirical literature (Ahmed, Yusuf and Anoruo Emmanuel, 2000; Edwards, S. 1998; Edwards, S. 1992; Harrison, A.

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1996; Iscan, Talan, 1998; Santos Paulino, 2002; Wacziarg R., 2001; Yanikkaya Halit, 2003). Due to the exceptional increment of world trade over the last decade economists and policy makers regard it as the engine of economic growth. Most of the economies are thus liberalizing their economies which are thought to influence economic growth in a variety of channels. First, a liberal trade regime improves resource allocation. Second, greater access to world market allows economies to congregate benefit from economies of scale. Third, imports of capital and intermediate goods can contribute to the growth process by enlarging the productive capacity of the economy. Fourth, trade can lead to productivity gains through international diffusion and adoption of new technologies and by spillover effects. Most of the empirical studies have concluded that the openness of the trade regime has positive impact on GDP growth. The adoption of relevant policies for trade enhancement has thus become decisive for the policy makers in both developed and developing countries.

Immediately after the independence, Bangladesh adopted an inward looking trade strategy. The main thrust of that inward looking trade strategy was the nationalization of all heavy industries and financial institutions of the country. The basic assertion of that state intruded and controlled policy was the dominance of the government role in the economic activity where the role of the private sector was desiccated. However, the excruciating results (viz. balance of payment crisis, foreign exchange shortage, relatively low growth rate of national income and micro inefficiencies like inefficient import competing enterprises having low quality products) such strategy forced the government to adopt the new outward oriented economic policies. The adoption of such market oriented economic policies was further intensified by the pressure and advises of the World Bank and the IMF. These policies came under the structural adjustment polices and has been implemented since 1982.

The paper is articulated in the following order. The introduction is followed by section 2 which critically examines the theoretical and empirical literature on the relationship between trade liberalization and economic growth. Section 3 sets out the objective and methodology of the paper. Section 4 analyzes the framework for testing stationarity, co-integration, error correction models and causality among the variables. Finally, section 5 concludes the paper with policy implications.

2. Literature Review

The dynamic causal relationship between trade liberalization and economic growth has largely been analyzed in the theoretical and empirical literature. The very early theoretical standpoint is the static gains from the trade through competition and the specialization by comparative advantage. The gains from trade has been explained variously, such as of market expansion by Karl Marx, technological know how by Structuralist School, optimal resource allocation by Classical School, ease of balance of payments by Neoclassical School and employment generation and income creation by New Trade School lead by Paul Krugman. These gains have further been analyzed by a wide variety of theoretical models in the tradition of 'endogenous growth theories' pioneered by Romer (1986) and Lucas (1988) particularly, Grossman and Helpman (1991); Edwards (1992); Romer (1992); Romer (1994); Barro and Sala-i-Martin (1995) and Coe and Helpman (1995) among others.

Edward (1992) used a cross country data set to analyze the relations between trade openness (trade intervention and distortions) and GDP growth of 30 developing countries over the period 1970 to 1982. Using Ordinary Least Squares (OLS) method the study showed that openness indicators were positively related with real per capita GDP growth, while trade intervention indexes were found significantly negatively associated with GDP growth. The study supports the hypothesis that countries with a more open trade regime have tended to grow faster, and a more distorted trade regime will tend to grow slower.

To analyze the relationship between openness and GDP growth Ann Harrison (1996) used a general production function specifying GDP as a function of capital stock, years of primary and secondary education, population, labour force, arable land and technological changes. He used seven openness measures to test the statistical relationship between openness and GDP growth. The cross-section estimation results show only black market rate significant with negative sign. The country time series panel results showed that three variables, tariff and non-tariff barriers with positive signs, black market rate and price distortion index used in dollar with negative signs, were found significant. Estimation for annual data show two variables, tariff and non-tariff barriers, and black market rate, significant with negative sign. The study thus concluded that the choice of period for analysis, of relationship between trade openness measures and GDP growth, is critical.

Edwards (1998) used comparative data for 93 countries to analyze the robustness of the relationship between openness and Total Factor Productivity (TFP) growth. The study used nine indexes of trade policy to analyze the connection between trade policy and TFP growth for the period 1980 to 1990. The results of OLS estimates found trade openness indexes significant with positive signs and trade distortion indexes were significant with negative signs. This relationship suggests that more open countries will tend to experience faster productivity growth than more protectionist countries.

Iscan, Talan (1998) analyzed the effect of trade openness on total factor productivity growth for Mexican manufacturing industries for the period 1970 to 1990. To identify the differential productivity effects of openness to foreign trade and trade liberalization, two measures (i) foreign trade variables, controlled by export share and (ii) measure of protection, control by effective rate of protection, were considered. The results of the Generalized Methods of Moments (GMM) estimations showed that after liberalization productivity growth has positive and significant relationship with exports, while change in effective rate of protection was found negative but significant. It was therefore concluded that liberalization has positively affected productivity growth.

Ahmed, Yusuf and Anoruo, Emmanuel (2000) investigated long-run relationship between GDP growth and openness for five South East Asian countries— Philippines, Indonesia, Malaysia, Singapore and Thailand for the period 1960 to 1997. They used export plus import growth rate as proxy of openness. The Johansan estimation results rejected the hypothesis that there is no co-integration between economic (GDP) growth and openness while the hypothesis that error correction term is significant could not be rejected. The Vector Error Correction estimation shows bi-direction causality.

Sinha D., Sinha T. (2000) analyzed the effects of growth of openness and investment on the growth of GDP for 15 Asian countries during 1950 to 1992. They developed a model which specified GDP growth as a function of growth rates of openness (export plus import), domestic investment and population. Using Auto Regressive Moving Average model (ARMA) the study found that the growth rate of GDP is positively related to the growth rates of openness and domestic investment. However, the relationship between the growth rate of GDP and the growth rate of population is not that clear cut.

Wacziarg (2001) investigated the links between trade policy and GDP growth in a panel of 57 countries for the period of 1970 to 1989. The study measured openness through an index which consisted of three trade policy variables. Based on fixed estimate OLS results the study concluded that there is a positive relationship between trade openness and GDP growth.

Santos-Paulino (2002) examined the impact of trade liberalization on export growth for a sample of 22 developing economies between 1972 and 1998. The study used a typical export growth function, which postulates that exports volume depends upon real exchange rate and world income. Trade openness is measured in two ways. First by the ratio of export duties to total export, as indicator of the degree of anti-export bias and second by a dummy variable of timing of the introduction of trade liberalization measures. The results of OLS estimate showed export duty significant with negative sign and the dummy variable is also significant with a positive sign. Therefore, it was concluded, exports grow faster in open economies.

Ynikkaya (2003) estimated the effect of trade liberalization on per capita income growth for 120 countries for the period 1970 to 1997. The study used two types of trade openness measures. The first openness measure was estimated by using trade volumes which include different ratios of trade variables (exports, imports, exports plus imports and trade with developed countries) with GDP. Another measure based on trade restrictiveness estimated by calculating restrictions on foreign exchange on bilateral payments and current transactions. The results of the GMM estimates showed that first group of openness, based on trade volumes were significant and positively related with per capita growth. However, for developing countries openness based on trade restrictions were also significant and positively related with per capita growth. The study thus concluded that trade restrictions in developing countries may cause faster GDP growth.

Following the general pattern, a few empirical studies explored the validity of trade liberalization and economic growth in Bangladesh using different data sets and adopting different econometric techniques and found mixed results (Zaman, 1996; Islam, 1998; Salim and Hossain, 2009; Eusuf and Ahmed, 2008; Hossain, 2007; Hossain et al., 2009 etc.). Although these studies bear significance, they suffer either from methodological deficiencies or from the omitted variable bias or have data problems. Besides, these studies tried to establish the empirical relationship between export and economic growth. The present paper marks an improvement over the early studies in terms of overcoming the above problems and relying on the Johansen-Juselius maximum likelihood method in fully specified error correction modeling which produces identical co-integrating vectors for either variables in the model.

3. Objective and Methodology

The causal nexus between trade liberalization and economic growth are well documented for the developed economies, while only a handful of studies have been conducted for the emerging economies like Bangladesh. Most of the recent studies on this issue tried to establish export led growth hypothesis and thus suffer from methodological deficiencies of omitted variable bias or specification errors. This study is an improvement of the early studies in terms of data used and methodological point of view. The major objective of this paper is to examine the causal relationship between trade liberalization and economic growth in the context of Bangladesh. That is to see whether they are co-integrated or not. It also sheds lights on the causal relationship among the considered variables using the annual time series data for the period 1982 to 2012. Following convention, we use exports plus imports as a measure of openness which is considered as the best proxy for trade liberalization. The main data sources are the publications of Bangladesh Bureau of Statistics (BBS), Bangladesh Export Promotion Bureau (BEPB) and the Economic Trends published by Bangladesh Bank. To examine the dynamic linkages among the variables the paper has taken into account of various modeling issues that arise in causality framework. The study uses the trade openness (sum of export and import) as a proxy for trade liberalization. The study considers the stationary properties of the data on the variables by applying the Augmented Dicky Fuller test. Then the Johansen and Juselius test has been applied to examine the co-integration i.e. the long-run relationships among the variables. The Error Correction Models and Granger causality test have been applied to test the short-run dynamics of long-run relationships between trade liberalization and economic growth. The findings of the above tests will help us suggesting apposite policy framework for the continuing trade liberalization efforts for Bangladesh so as to reap the maximum benefits.

4. The Analytical Framework and Results

The traditional practice in testing the direction of causality between two variables has been to use the standard Granger (1969) framework. The standard Granger causality test consists of estimating the following equations:

$$Y_t = \beta_0 + \sum_{i=1}^{m} \beta_i Y_{t-i} + \sum_{j=1}^{n} \alpha_j X_{t-j} + u_t \tag{1}$$

$$X_t = \gamma_0 + \sum_{i=1}^{m} \gamma_i X_{t-i} + \sum_{j=1}^{n} \delta_j Y_{t-j} + v_t \tag{2}$$

where u and v are mutually uncorrelated white noise series and *t* denotes time period. Causality may be determined by estimating equations (1) and (2) and testing the null hypothesis that $\alpha_j = \delta_j = 0$ for all j's against the alternative hypothesis that $\alpha_j \neq 0$ and $\delta_j \neq 0$ for at least some j's. If the coefficients α_j's are statistically significant but δ_j's are not, then Y is said to have been caused by X. The reverse causality holds if δ_j's are statistically significant while α_j's are not. If both α_j and δ_j are significant, then causality runs both ways.

The stationary properties of the series are not taken into consideration in the standard Granger causality test which may report one way, or two way causality or no causality. However, if the variables are co-integrated, the modified Granger causality test rules out the possibility of no causality when the variables share a common trend. The estimation of the Granger causality test involves three steps. Step I includes the identification of the order of integration of the variables under consideration. Co-integration is determined through the Engle Granger two-step method (Engle and Granger, 1987) in step II. In step III, we proceed with the standard Granger causality test if the variables are not co-integrated. However, if the variables are co-integrated, the residuals obtained from the co-integrating regressions are used as error-correction terms in estimating the modified Granger causality equations.

Step I. Testing for the Order of Integration

The first step consists of determining the order of integration of the variables under consideration. This is done by using the Augmented Dickey-Fuller (ADF) test (Dickey and Fuller, 1981) as follows:

$$\Delta Q_t = \phi_0 + \phi_1 t + \gamma_0 Q_{t-1} + \sum_{i=1}^{n} \psi_t \Delta Q_{t-1} + \varepsilon_t \quad (3)$$

In the above equations, Q_t is a random walk with drift around a stochastic trend, Δ is the first difference operator, ε_t is the white noise error term. The null hypothesis that W is a non-stationary time series is rejected if γ_0 is less than zero and statistically significant. The ADF test is carried out by replacing Q_t with GDP_t, and $TLIB_t$ in equation (3) respectively.

Table 1: Unit Root Test with ADF for the Period 1982-2012

Variables First Difference	C	First Difference		C, T
GDP	-1.164 (2)	-2.690 (2)*	-1.772 (2)	-3.456 (2)*
TLIB	-1.517 (1)	-2.718 (1)*	-1.642 (1)	-3.693 (1)**

Notes: (i) C = constant term included in the unit root test, C,T = constant and trend term included in unit root test; (ii) Figures within parentheses indicate lag lengths chosen by the Akaike Information Criterion (AIC); (iii) ** and * denote rejection of the null hypothesis of unit root at the 5% and 10% levels respectively.

Results of the unit root tests are reported in Table 1. The results indicate that at the levels GDP and TIB are non-stationary. Therefore, to achieve stationarity the variables must be first differenced. The ADF statistics are significant only for the first-differenced series. This shows that, all the series are integrated of the same order i.e. I(1). Since all of the series are integrated of the same order, the series may be tested for the existence of a long-run relationship between them. Thus, co-integration analysis can be applied to the selected variables in the present analysis as all the series are found to be stationary in first differences.

Step II. Co-integration Test

Co-integration is the statistical implication of the existence of a long-run relationship between economic variables (Thomas, 1993). In other words, a long-run relationship means that the variables move together over time so that any short-run deviations from the long-run trend will be corrected (Manning and Andrianacos, 1993). The central idea behind co-integration is that if, in the long-run, two or more series move closely together, even though the series themselves are trended, the difference between them is constant. It is possible to regard these series as defining a long-run equilibrium relationship, as the difference between them is stationary (Hall and Henry, 1989). A lack of co-integration suggests that such variables have no long-run relationship and they can wander arbitrarily far away from each other (Dickey et al., 1991).

The Engle-Granger two-step method (Engle and Granger, 1987) is used for testing co-integration. The first step consists of identifying the order of integration of the variables included in the model. A series is said to be integrated of order *d* if it has to be differenced *d* times to become stationary. The second step requires the estimation of the residuals from the OLS regression on the levels of the variables. The residuals measure the extent to which the variables are out of equilibrium. On the basis of the Engle-Granger test, two variables will be co-integrated if they are integrated in the same order i.e. $I(d)$ and a linear combination of them (i.e. the residual) is integrated of order less than *d*. For example, GDP_t and $TLIB_t$ will be co-integrated if the residuals in the regression of GDP_t on $TLIB_t$ (and vice versa) is $I(0)$ provided that $GDP_t \sim I(1)$ and $TLIB_t \sim I(1)$. The null hypothesis of the co-integration test is that the series formed by the residuals of each of the co-integrating regressions is non-stationary. To test the null hypothesis of non-stationarity of the residuals, the ADF unit root tests are employed on the residuals of money vs. GDP as well as money vs. prices co-integrating regressions.

Table 2: Unit Root Rest for the Residuals 'u_t'

Co-integrating Regressions	ADF
$GDP_t = 6.45 + 1.45\ TLIB_t$	2.97 (2)*
$TLIB_t = -7.34 + 0.58\ GDP_t$	3.12 (1)**

Notes: (i) Figures within parentheses indicate lag lengths chosen by the Akaike Information Criterion (AIC); (ii) ** and * denote rejection of the null hypothesis of unit root at the 5% and 10% levels respectively.

Table 2 presents the results of the ADF unit root tests for the residuals series from the different co-integrating regressions respectively. The estimated results suggest that the null hypothesis of non-stationarity of the residuals can be rejected depicting a long-run relationship between trade liberalization and Gross Domestic Product (GDP). The residuals of the co-integrating regressions are stationary indicating that deviations between trade liberalization and Gross Domestic Product reconciling together in the long-run.

Step III. The Modified Granger Causality Test

As the variables turn out to be co-integrated, the standard Granger causality test is modified by incorporating the error correction terms obtained from the co-integrating regressions as follows:

$$\Delta Y_t = \beta_0 + \rho_1 \eta_{t-1} + \sum_{i=1}^{m} \beta_i \Delta Y_{t-i} + \sum_{j=1}^{n} \alpha_j \Delta X_{t-j} + u_t \tag{4}$$

$$\Delta X_t = \gamma_0 + \rho_2 \mu_{t-1} + \sum_{i=1}^{m} \gamma_i \Delta X_{t-i} + \sum_{j=1}^{n} \delta_j \Delta Y_{t-j} + v_t \tag{5}$$

where all variables are stationary time series, Δ is the first difference operator and $\eta_{t\text{-}1}$ and $\mu_{t\text{-}1}$ are the error correction terms which represents the lagged residuals from the co-integrating equations, *m* and *n* are the lag lengths chosen by the Akaike Information Criterion (AIC) and u_t and v_t are the disturbance terms. X is said to Granger cause Y not only if α_i's are jointly significant but also if ρ_1 is significant. Similarly, Y is said to Granger cause X not only if δ_j's are jointly significant but also if ρ_2 is significant.

Table 3: Granger Causality Tests

Null Hypothesis	t-Statistic	on Error Correction Term
GDP does not Granger cause TLIB	3.32**	- 1.265
TLIB does not Granger cause GDP	2.72**	- 0.952

Notes: (i) ** denote rejection of the null hypothesis at the 5% level respectively; (ii) The optimal lag length has been considered to be 2 according to the Akaike Information Criterion (AIC).

Table 3 reports the F-statistics and the t-statistics on the lagged ECM terms. The lagged changes in the independent variable represent the short-run causal impact while the error correction term gives the long-run impact. The F-statistic measures the short-run causation while the t-statistic on the lagged error correction terms indicates long-run causality. Both tests show that there exists bidirectional causality both in the short as well as in the long-run between money and income. As far as money and prices are concerned, unidirectional causality between these two variables is found in the short-run and in the long-run. It runs from trade liberalization to gross domestic product with feedback effect.

5. Summary and Conclusion

Like many developing countries, Bangladesh has also moved towards greater openness through trade liberalisation over the last decades. The objective of this study has been to empirically examine the relationship between trade liberalization and economic growth in Bangladesh. A wide range of time series data has been used to conduct the study and also all standard time series techniques have been applied. Granger causality test is employed to determine the direction of causation between trade liberalization and economic growth, duly taking into account the stationarity properties of the time series data. Tests for the existence of unit roots confirm that both real GDP and openness (trade liberalization) are non-stationary processes that are integrated of order 1. Furthermore, there is evidence of a long-run equilibrium relationship between openness (trade liberalization) and economic growth. An error-correction model is estimated to investigate the short-run as well as long-run causal patterns. The results indicate the absence of causality between openness and economic growth in the short-run. This suggests that short-run variations in openness and growth rates may be dominated by business cycle fluctuations with no clear causal pattern in the short-run. However, the evidence of bi-directional causality between trade liberalization and economic growth in the long-run indicates that both liberalization and economic growth reinforce each other in a longer term perspective.

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Budget Deficit and Economic Growth of Bangladesh: A VAR-VECM Approach

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Abstract There are three schools of thought regarding economic effects of budget deficit: Neoclassical, Keynesian and Ricardian. Advocates of different schools of thought elucidate different consequences of deficit budget. Empirical researches also failed to conclude concretely about the economic effect of budget deficit. In this study the relationship between budget deficit and economic growth has been explored empirically in the case of Bangladesh. Model developed by Shojai has been used where using time series data GDP regressed with inflation rate, real interest rate, real effective exchange rate, budget deficit and gross investment. An Augmented Dickey-Fuller and Johansen Co-integration test has been used for time series diagnosis. Using results of diagnostic tests, Vector Error Correction Model has been used. Empirical results show significant negative effect of budget deficit on economic growth of Bangladesh which is in conformity with experiences of many other developing countries.

Keywords Budget Deficit, Vector Error Correction Model, Inflation Rate, Real Effective Exchange Rate, Real Interest Rate.

1. Introduction

The impact of budget deficit on GDP basically depends on the sources and uses of deficit fund. In recent years Bangladesh government is heavily borrowing from banking system. In the fiscal year 2013-2014 targeted borrowing from banking system is BDT 432.77 billion. If current level of budget variance persists, it may come close to BDT 500 billion mark. This level of budget deficit is large for an economy like Bangladesh. The budget balance of any country – surplus or deficit – is the outcome of a complex interaction of the entire current and expected future fiscal programme (tax rates, spending, deficits and debt) and the

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economy, and perhaps also the policy (Garret, 2008). The conventional wisdom is that a large budget deficit is a source of economic instability. Large deficits potentially cause two separate but related problems: (i) shifting the bill for financing the current generation's consumption to future generations and (ii) crowding out private investment. However, empirical research does not conclusively support conventional wisdom; results are mixed and controversial across countries, data and methodologies.

Though Bangladesh consistently depends on deficit budget, there are little empirical study to make conclusion about its economic effect. This study will make an attempt to fill in this gap. The current study is segmented as follows: brief literature review, analytical framework, data analysis, result analysis and conclusion.

2. Literature Review

In general, there are three schools of thought concerning the economic effects of budget deficits: Neoclassical, Keynesian and Ricardian. The Neoclassical one imagines intuitive individuals planning consumption over their own life cycles. They view budget deficits as a way to raise lifetime consumption by shifting taxes to subsequent generations. But higher consumption implies lower savings and thus interest rate must increase so as to bring back capital markets into balance. In this situation, crowding out problems may arise. Under the Keynesian view, an important percentage of the population is considered to be either myopic or liquidity constrained and deficits are seen as having beneficial consequences when appropriately timed. On the other hand, Ricardians consider deficit policy as a matter of indifference, posing their attention on altruistically motivated transfers (Mukhtar and Zakaria, 2008). Like different school of views, researches conducted to appreciate the significance of deficits on income also give mixed findings.

For Malaysia, there is no long-run relationship between budget deficit and economic growth in consideration of the Ricardian equivalence hypothesis (Rahman, 2012). Researchers in Pakistan also found that fiscal profligacy seriously undermine the growth objectives thereby adversely impacting physical and social infrastructure in the country (Fatima, 2011). In the case of India also there is negative and significant relationship between fiscal deficit and economic growth in the long-run (Mohanty, 2013). The studies suggest reduction of subsidies and investing this money in health, education, infrastructure sectors such as power and roads etc., so that it will enhance the productivity of both human capital and physical capital, which will go a long way in increasing the per capita income of the people.

Economic effects of budget deficit on other macroeconomic variables are important. Some authors found evidence that budget deficits cause inflation (McMillin, 1986). Similar results also reported by other researchers (Edwards and Tabellini, 1991; Favero and Spinelli, 1999; Metin, 1998; Ozatay, 2000). On the contrary, some authors conclude that budget deficits do not contribute significantly to higher inflation (Karras, 1994; King and Plosser, 1985). In the case of interest, some authors found no causal relationship between budget deficits and interest rates in the US and some other countries (Evans, 1987; Barro, 1987). On the other hand, Hoelscher (1986) and Cebula and Koch (1989) found that federal budget deficits contribute to higher levels of interest rate yields. Evans (1985) suggested that federal deficits affect consumption and interest rates whereas Berheim (1989) found evidence to the contrary. Krugman (1995) and Sachs (1985) argued that lower budget deficit lowers the value of the dollar. There are numerous studies in the literature holding this opinion, mostly in the case of the United States of America (Mundell, 1963; Fleming, 1963; Dornbusch, 1976). Evans (1986) found no evidence of the presence of any relationship between budget deficit and value of domestic currency and suggested that budget deficits are a sign of weakness in the economy.

Apart from these, budget deficit amount, volatility and source of deficit finance have been focused by some researchers. High and volatile fiscal deficits may be harmful to welfare, for instance, debt-to-GDP ratio is negatively related to the long-run fiscal sustainability, therefore, affecting the living standards of future generations (Alesina and Perorri, 1996; Woo, 1999; Alesina and Rodrik, 1994; Persson and Tabellini, 1997). High and volatile deficit may also increase the level and volatility of inflation since central bank is deficient in independence (Fatas and Mihov, 2006).

Theoretically it has been a firm belief that if government finances its deficit from the banking system heavily it might crowd out private corporation from the debt market. Chhibber and Wijnbergen (1998) argued in their study with Turkish data that large budget deficit financed by borrowing domestically slowed down private investment causing real rate of interest to increase. Majumder (2007) conducted a research to check the crowding out effect in Bangladesh. But he found that Bangladesh experiences crowding in rather than crowding out due to excess liquidity prevailing in the banking system.

In the same veiw Hossain (2012) showed that budget deficit accelerated economic growth in the case of Bangladesh. On the other hand, research performed for Pakistan by Fatima, Ahmed and Rehman (2012) found negative impact of budget deficit on economic growth.

3. Empirical Model

Model developed by Shojai (1999) has been used in this paper to assess effects of budget deficit on the economic growth of Bangladesh. Here, Ordinary Least Square is employed. The model is as follow:

$$\log(GDP) = \beta_0 + \beta_1 INF + \beta_2 REER + \beta_3 RINT + \beta_4 \log(BD) + \beta_5 \log(GINV) + \varepsilon \quad \text{(a)}$$

where,

GDP = Gross Domestic Product;

INF = Inflation rate;

REER = Real Effective Exchange Rate;

RINT = Real Interest rate;

BD = Budget Deficit;

GINV = Gross Investment;

ε = Stochastic Error Terms and

β_0, β_1, β_2, β_3, β_4 and β_5 are the respective parameters.

Out of six variables of the equation (a) three (GDP, BD and GINV) have been transformed using log function because these variables were in absolute format where as other three were in relative format. Data of this study is annual for 1976-77 to 2011-12. Annual GDP data is in billion of current local currency, budget deficit in billion of current local currency and gross investment in billion of current local currency are collected from Bangladesh Economic Survey published by the Ministry of Finance. Gross investment equals public investment + private investment and budget deficit equals revenue receipt – revenue expenditure – development expenditure. Inflation rate and real interest rate are collected from World Development Indicators published by the World Bank. Inflation is represented by GDP Deflator. Lastly, real effective exchange rate is collected from Zsolt Darvas (Darvas, 2012.).

Some diagnostic tests were conducted first to check the applicability of time series data used in this study. Augmented Dickey-Fuller (ADF) unit root test was performed for stationary test. The extended regression used in the ADF test can be expressed in its most general form as:

$$\Delta Y_t = \mu + \gamma Y_{t-1} + \Sigma_{j=1}^{p} \alpha_j \Delta Y_{t-j} + \beta t + \omega_t \quad \text{(b)}$$

where μ is the drift term, t denotes the time trend, and p is the largest lag length used. In this model, H_0 = there is unit root and H_1 = there is no unit root.

Furthermore, the time series has to check for cointegration. It helps to identify the long-run economic relationship between two (or more) variables and avoids the spurious relationship problem. Cointegration test is used because if Vector Autoregressive model is used in the first difference for non-stationary cointegrating time series, results might be misspecified due to the effect of common trend. Johansen (1988) suggested two test statistics to determine the cointegration rank. The first of these is known as trace statistic:

$$N\{trace(r_0 jk)\} = -T\sum_{i=r_0+1}^{k} \ln (1+\lambda_i) \tag{c}$$

Where the estimated Eigen values $\lambda_1>\lambda_2>\lambda_3>.............>\lambda_k$ and r_0 ranges from zero to k-1 depending upon the stage in the sequence. This is relevant test statistics for the null hypothesis $r \leq r_0$ against the alternative $r \geq r_0+1$. The second test statistic is the maximum Eigen value test known as $\lambda_{max}(r_0)$. This is closely related to the trace statistic, but arises from changing the alternative hypothesis from $r \geq r_0+1$ to $r = r_0+1$. The idea is to improve the power of the test by limiting the alternative to a cointegration rank which is just by one more than the null hypothesis. The λ_{max} test statistic is:

$$\lambda_{max}(r_0) = -T \text{ in } (1-\lambda_i) \text{ for } i = r_0+1 \tag{d}$$

The null hypothesis is that there are ‘r’ cointegrating vectors, against the alternative of $r+1$ cointegrating vectors. Johansen and Juselius (1990) indicated that the trace test might lack power relative to the maximum Eigen value test. Based on the power of the test, the maximum Eigen value test statistic is often preferred.

According to Granger (1969), Y is said to “Granger-cause” X if and only if X is better predicted by using the past values of Y than by not doing so with the past values of X being used in either case. In short, if a scalar Y can help to forecast another scalar X, then we say that Y Granger-causes X. If Y causes X and X does not cause Y, it is said that unidirectional causality exists from Y to X. If Y does not cause X and X does not cause Y, then X and Y are statistically independent. If Y causes X and X causes Y, it is said that feedback exists between X and Y. Essentially, Granger’s definition of causality is framed in terms of predictability.

4. Empirical Results and Discussion

Table 1 shows descriptive statistics of the macroeconomic variables of Bangladesh used in the regression model. All variables except Real Effective Exchange Rate are not normally distributed. Three variables were found highly skewed, two moderately skewed and the remaining approximately symmetric. The sample has positive kurtosis and leptokurtic in character.

Table 1: Descriptive Statistics

Statistics	GDP	INF	REER	RINT	BD	GINV
Mean	2256.401	6.359293	118.9981	7.497232	107.6592	509.2936
Median	1439.650	6.404610	117.6175	8.391348	67.70000	270.4000
Maximum	9147.800	25.61889	138.5398	34.75849	452.0000	2327.800
Minimum	105.3600	-17.63042	98.32103	-11.63749	8.320000	10.87000
Std. Dev.	2376.517	6.528332	10.97630	7.336867	108.0031	614.7861
Skewness	1.364333	- 0.590556	0.077367	0.756857	1.594770	1.420734
Kurtosis	4.041546	8.123148	2.200709	7.520612	4.907065	4.178275
Jarque-Bera	12.79566	41.46251	0.994213	34.09090	20.71510	14.19341
Probability	0.001665	0.000000	0.608288	0.000000	0.000032	0.000828

Table 2 shows the ADF test statistics for the selected macroeconomic variables. As mentioned in previous section the null hypothesis for ADF test is in existence of unit root i.e. data set is non-stationary. If we cannot reject the null hypothesis, the data set have the unit root. At the levels, some of our variables has unit root such as real effective interest rate and budget deficit at 5% significant level in both intercepts, trends and intercepts. In the first difference none of the variables has unit root or all data set become stationary. For regression analysis model can't infer from non-stationary data set.

Table 2: ADF Unit Root Test

Variables	Levels			1st Difference		
	Lags	Intercept	Trend and Intercept	Lags	Intercept	Trend and Intercept
GDP	0	-2.611117* (1.857369)	-3.753781** (1.937432)	1	-4.470753*** (2.033349)	-4.537631*** (1.980419)
INF	0	-5.508530*** (1.940666)	-6.381061*** (2.300783)	1	-13.90443*** (1.790683)	-13.59317*** (1.944084)
REER	0	-1.591127 (1.687384)	-2.482358 (1.564811)	1	-4.722129*** (2.059506)	-4.695703*** (2.072727)
RINT	0	-5.144371*** (1.456521)	-6.194883*** (1.770115)	1	-12.46100*** (1.711500)	-12.68117*** (1.963919)
BD	0	-1.041958 (2.461428)	-3.488934* (2.109597)	1	-5.324438*** (2.068384)	-7.144726*** (2.062944)
GINV	0	-1.324340 (2.929223)	-3.815738** (2.383187)	1	-5.335033*** (2.002128)	-5.534817*** (1.991921)

Notes: i. ***, **, * indicates ADF score is significant at 1%, 5%, 10% level respectively i.e. we can reject the null hypothesis.

ii. MacKinnon (1996) one-sided p-values are used to check the statistical significance.

iii. Values in the parentheses are Durbin-Watson statistics.

Results of Johansen cointegration test is given in Table 3. Here empirical results show that there exist two co-integrating equations. The test shows rejection of null hypothesis (there is r integrating vector) in none and at most 1 as trace/Eigen value statistics of at most 2 scenarios are smaller than its critical value, we can't reject the null.

Table 3: Johansen Cointegration Test

Hypothesized no of Cointegrating Equation(s)	Eigen value	Trace/Max-Eigen Statistics	Critical Value at 5%	P-value
		Trace test		
None*	0.730168	126.7678	95.75366	0.0001
At most 1*	0.650254	82.22933	69.81889	0.0037
At most 2	0.451223	46.51071	47.85613	0.0665
		Maximum Eigenvalue test		
None*	0.730168	44.53850	40.07757	0.0147
At most 1*	0.650254	35.71862	33.87687	0.0298
At most 2	0.451223	20.40212	27.58434	0.3140

Notes: 1. MacKinnon-Haug-Michelis (1999) p-values.
2. * Indicates the rejection of null hypothesis at 5% level.

The above results confirm that our variables are cointegrated. As two cointegrating equations are found, there is causality in at least one direction. As in the presence of cointegrating relationship among variables, VAR model might mislead the statistical inference. For determination of Granger-cause of budget deficit on GDP and other economic variables we use Vector Error Correction Model (VECM). According to Engle and Granger (1987), if two variables are cointegrated, then a more comprehensive test of causality, which has become known as an error correction model, should be adopted. The VECM specification restricts the long-run behaviour of the endogenous variables to converge to their cointegrating relationships while allowing a wide range of short-run dynamics. The cointegration term is known as the error correction term since the deviation from long-run equilibrium is corrected gradually through a series of partial short-run adjustments.

In the VECM, the system will include residual from the vector (lagged two periods) in the dynamic Vector Error Correcting Mechanism (VECM) for Granger causality. In this study we select lag value two on the basis of Akaike Information Criteria (AIC). In the following table results of VECM for Granger causality are presented.

Table 4: Granger Causality Using VECM

Error Correction	D(LGDP)	D(LBD)	D(LGINV)	D(RINT)	D(INF)	D(REER)
CointEq1	0.029431 [0.40312]	0.659119 [1.53263]	-0.286952 [-0.88712]	0.140103 [0.02155]	7.174343 [1.22748]	8.100680 [0.70474]
CointEq2	0.098233 [1.86109]*	-0.680356 [-2.18825]**	0.296209 [1.26666]	0.583626 [0.12415]	-2.734410 [-0.64712]	-4.506197 [-0.54225]
D(LGDP-1)	-0.312659 [-1.72560]*	2.687153 [2.51775]**	-0.475014 [-0.59174]	-5.586861 [-0.34621]	-2.464738 [-0.16992]	66.74628 [2.33980]**
D(LGDP-2)	0.195692 [0.96717]	1.215902 [1.02018]	-0.187966 [-0.20968]	15.63438 [0.86759]	-5.963410 [-0.36816]	-52.74779 [-1.65583]*
D(LBD-1)	-0.092143 [-2.22893]**	-0.048508 [-0.19920]	-0.175325 [-0.95726]	-2.532551 [-0.68786]	4.107619 [1.24117]	4.219689 [0.64833]
D(LBD-2)	-0.077303 [-2.21234]**	-0.031108 [-0.15114]	0.015124 [0.09770]	-1.770776 [-0.56902]	2.905085 [1.03854]	9.807786 [1.78283]*
D(LGINV-1)	0.222263 [3.05915]***	0.082577 [0.19295]	-0.501989 [-1.55948]	6.995018 [1.08101]	0.077347 [0.01330]	-2.270528 [-0.19849]
D(LGINV-2)	0.069212 [1.08607]	-0.453547 [-1.20822]	-0.212911 [-0.75409]	5.508460 [0.97053]	-0.600291 [-0.11766]	-10.55364 [-1.05186]
D(RINT-1)	0.009106 [0.92341]	0.027185 [0.46802]	-0.047795 [-1.09400]	0.796103 [0.90648]	0.191176 [0.24217]	1.614353 [1.03983]
D(RINT-2)	0.017502 [1.37506]	0.016290 [0.21727]	-0.004797 [-0.08506]	0.150680 [0.13292]	0.826290 [0.81091]	-0.790201 [-0.39432]
D(INF-1)	0.013442 [1.23844]	0.023508 [0.36767]	-0.045265 [-0.94127]	1.072900 [1.10985]	0.039752 [0.04575]	1.274737 [0.74594]
D(INF-2)	0.019778 [1.62968]	0.015667 [0.21915]	0.016613 [0.30897]	0.079574 [0.07362]	0.858177 [0.88329]	-0.400546 [-0.20963]
D(REER-1)	-0.001388 [-0.75635]	-0.005307 [-0.49114]	-0.003004 [-0.36955]	-0.152213 [-0.93159]	-0.011502 [-0.07831]	0.524665 [1.81649]*
D(REER-2)	-0.003294 [-2.53631]**	0.004516 [0.59037]	-0.006288 [-1.09279]	0.256334 [2.21613]**	-0.180390 [-1.73502]*	-0.412443 [-2.01711]**
C	0.104739 [2.73429]***	-0.300985 [-1.33392]	0.330205 [1.94568]*	-2.147997 [-0.62961]	-0.217638 [-0.07097]	-1.952229 [-0.32370]

Notes: i. ***, **, * Indicates value is significant at 1%, 5%, 10% level respectively.
ii. t-statistics in the parentheses.

Empirical results show that significant feedback exists between GDP and BD. BD is negatively related to GDP growth meaning budget deficit is hampering economic growth of Bangladesh. Significant feedback also exists between REER and GDP. Furthermore, two unidirectional causal relationships are found at 5% significant level; GINV has unidirectional causal relationship with GDP running from GINV to GDP; REER has unidirectional causal relationship with RINT running from REER to RINT. This empirical survey could not document any further causal relationship between variables.

Variance decomposition results are reported in Table 5. This analysis is employed as additional evidence presenting more detailed information regarding the variance relations between the selected macroeconomic variables.

Table 5: Variance Decomposition of GDP

Period	S.E.	LGDP	LBD	LGINV	INF	RINT	REER
1	0.031539	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.045392	82.65158	4.709197	8.966003	0.294859	0.710893	2.667464
3	0.063889	81.82553	3.047302	7.163158	0.727673	0.362305	6.874028
4	0.082982	76.15418	6.206303	5.527047	3.442921	0.506547	8.163000
5	0.100419	78.24969	7.849237	4.313809	2.801416	0.387022	6.398821
6	0.116397	75.40406	11.48971	3.528911	2.398550	1.041049	6.137725
7	0.137630	68.30254	14.62596	3.640995	1.750934	3.984921	7.694650
8	0.160346	63.63403	15.38860	4.272784	1.295896	5.561308	9.847386
9	0.179054	63.99358	15.14460	4.251459	1.047685	5.162853	10.39983
10	0.196086	66.03176	15.08653	3.787010	0.909530	4.327776	9.857397

Table 5 reveals that budget deficit accounts 6.21 per cent variance of log GDP in lag four periods and 15.09 per cent in lag ten periods. Most of the variance of log GDP is explained by lagged log GDP of 76.15 per cent in lag four periods and 66.03 per cent in lag ten periods. Finally other variables don't have significant variance causality on log GDP. This result conforms to our earlier findings that budget deficit has a long-run equilibrium relationship with Gross Domestic Product.

5. Conclusion

The objective of the study was to find out the economic effect of deficit finance in Bangladesh. The data set of the sample period being non-stationary and cointigrated, VECM approach was followed to reveal that budget deficit has long-run negative associationship with the GDP growth of Bangladesh. Bangladesh government relies considerably on deficit budget to finance development expenditure. But these development projects are seen to have little impact on GDP growth. The conventional wisdom is that good economic conditions and expansionary fiscal policy help incumbents get reelected. For this reason governments generally try to make expansionary budget by making room for large deficit.

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Sustainable Renewable Energy for Development: Access to Finance on Solar Energy for Bangladesh

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Abstract Government of Bangladesh takes different financing models for renewable energy projects, especially solar energy, in urban and rural communities, and energy efficiency improvement projects. In regression analysis all the explanatory variables have significant impacts on the log of daily generated solar energy performance. Thus when successful with these new approaches, the Government should also be providing support for the thriving solar energy and energy efficient technology projects for sustainable renewable energy development in Bangladesh.

Keywords Renewable Energy, Energy Efficiency, Sustainable Development, Solar Energy.

1. Introduction

Bangladesh is facing serious energy crisis with adverse impact on its growth potential and livelihood of people. The country is far behind to realize 8% annual growth in energy supply which is needed even to maintain the current level of annual Gross Domestic Product growth rate of 6% (BBS, 2013). Because of the severity of power crisis, the Government has been forced to enter into contractual agreements for high cost and temporary solutions. To scale up the use of renewable energy and energy efficient technologies and develop this commercially, the need for greater involvement of stakeholders and financial institutions has become essential for rapid growth of renewable energy and energy efficient technologies (Kotchen and Moore, 2007).

Under the Companies Act, 1994, the Government of Bangladesh (GoB), is establishing an institution named "Sustainable Energy Development Authority" (SEDA). This will be a focal point for

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'Sustainable Energy' development and promotion which are renewable energy and energy efficient. The longer term strategy embedded in the Sixth Five-Year Plan (SFYP) of Bangladesh aims to promote low cost, sustainable expansion of power generation, transmission, and distribution capacity. The Government of Bangladesh as part of its energy policy is forging ahead in developing structures and policies, which facilitate Public Private Partnership (PPP) in the development of renewable energy and energy efficient services across the country.

Energy efficiency and renewable energy are said to be the twin pillars of any sustainable energy policy. It has a national security benefit as it reduces energy imports (i.e. increase government reserves) and gradually diminishing the rate at which domestic energy resources are depleted. Energy savings will reduce Bangladesh's energy demand-supply gap and mitigate adverse effects on climate change. Efficient use of energy should be seen as a moral issue – to use available energy resources in consideration of future generations. Since the energy system plays a vital role in interrelated economic, financial, social, and environmental aims of sustainable human development, energy efficiency improvements is crucial to climate change and sustainable energy development.

In view of the above, the objective of the study is set to empirically test the factors of daily generated solar energy performance by using multiple logistic regression model analysis techniques. And to investigate gaps between policy makers, regulators, financial institutions and potential borrowers in consideration of future generations demand for sustainable renewable energy for development in Bangladesh.

This paper is organized into six sections. Following the introduction literature review is presented in Section II. Analysis of the renewable energy and energy efficient technologies of Bangladesh are in Section III and IV includes data and methodology framework for the analytical analysis and it also identifies and defines the variables considered. Section V examines the empirical results and finally summary and concluding remarks are presented in Section VI.

2. Review of the Literature

The supply of renewable energy across the world is not sufficient (Jefferson, 2006). Market barriers, economic and financial barriers, institutional barriers, and technical barriers prevent entry of renewable energy into energy markets (Painuly, 2001). The effect of these barriers may vary across technologies and countries. Mitchell et al. (2004) argued that a feed-in tariff system is more effective to increase the share of renewable energy because it provides different kind of risk reduction in terms of price, volume and balancing risk. The drivers of development of renewable energy are identified such as Renewable Portfolio Standards (PRS), financial incentives, consumer demand for green power and wholesale market rules (Bird et al., 2005).

Measuring the economic value of benefits from using renewable electricity could provide information of the location and slope of the demand curve for renewable energy. The concept of consumers' Willingness to Pay (WTP) is the cornerstone principle in measuring the benefits (Brent, 2007). Although different methods are used, positive WTP values for renewable electricity are usually concluded. Economics rely on the concept of preferences and the utility maximization model. Bird et al. (2002) review international green power marketing activities by 2002 and the market penetration rates have typically been in the order of 1%. A successful market example is Netherlands where 13% of residential customers had chosen green power.

Kobos et al. (2006) suggest that without sustained federal Research and Development (R&D) and commercial marketplace, a longer time will be needed to achieve cost reductions and further market adoption. The effectiveness of Renewable Portfolio Standard (RPS) is found to increase the total amount of renewable energy generation, but it is not a predictor of the share of renewable energy in the total energy mix (Wiser and Pickle, 1997). Shrimali and Kniefel (2011) investigate the effectiveness of policies on the penetration of various emerging renewable electricity sources. Except a study that examines the effect of individual policy measures on technology innovation (Johnstone et al., 2010), other studies examine effectiveness of R&D, feed-in tariffs, and quota obligations all at once. Popp et al. (2011) indicate that investment in renewable energy capacity across 26 OECD countries owns much too technological innovation, rather than individual policies.

Actual adopters of green electricity have been profiled by a few studies. A range of studies focused on the role of moral norms and beliefs about environmental conditions and personal responsibility which are based on the norm-activation theory (Schwartz, 1977; Schwartz and Howard, 1981). The number of environmental associations, an individual participates in economic factors (including WTP), knowledge, and environmental concern are correlated with adoption (Arkesteijn and Oerlemans, 2005).

3. Renewable Energy and Energy Efficient Technologies of Bangladesh

Renewable or 'green' energy is now at forefront of the country's priorities for environmentally sustainable economic progress. It is urgently needed to address energy supply shortage for households, manufacturing units and commercial establishments; and this energy is needed to be produced in ways that minimize carbon emission and climate change effects. Although Bangladesh contributes very little to the renewable energy for power generation (more than 2 per cent), the Government has a vision of enhancing this to 10 per cent by 2020 (BBS, 2013).

Being an agro based economy, the potential and scope for the development of renewable energy and energy efficiency is tremendous in Bangladesh. It has now become essential to rapidly expand the use of technology in diverse products. To scale up the use of renewable energy and energy efficient technology and develop this commercially, the need for greater involvement of financial institutions has become essential for rapid growth of renewable energy and energy efficient technologies. And identifying the barriers to accessing financing for renewable energy and energy efficient technologies and gaps between policy makers, regulators, financial institutions and potential borrowers is an important task.

At present Bangladesh takes different economic and financial models that will be developed and tested for renewable energy projects in urban and rural communities and energy efficiency improvement projects. Although there are some channels like financing of NGO undertakings. This has had very little impact. The reason for this is the relative absence of a focused approach by banks and other financial institutions to provide commercial loans to renewable energy and energy efficient technology based projects.

The Government is providing support, including tax/duty waivers for the projects (Menanteau, Finon, and Lamy, 2003). Bangladesh Bank is promoting financing for solar energy, biomass and other renewable energy projects with refinance support lines for the lenders. The central purpose of these schemes is channeling funds through scheduled banks to specific sectors to accelerate economic activities in those sectors. Bangladesh Bank through its circulars issued at different times, has offered various refinance schemes, for accommodating special facilities to scheduled banks at concessional rates (Appendix 1.)

4. Methodology and Data

4.1 Data

Primary data is collected through cross section study. Quantitative technique is used to see the factors of access to finance on solar energy and energy efficient technology at the individual and micro level. For this a survey was conducted in urban area, Mohakhali and Niketan, Ward no. 20, Zone 3, Gulshan at Dhaka North City Corporation (DNCC) on nos. of household 4,062, and 1.729 square kilometer area in Bangladesh.

The systematic sampling design that is used in the study is appropriately performed based on the geographical location and determined the size of sample. For the norm of desirable 4 per cent sample, the first item was selected randomly from the first twenty five and thereafter every 25^{th} item was automatically included in the sample. Thus, for systematic sampling only the first unit was selected randomly and remaining units of the sample were selected at fixed intervals. It is an easy and less costly method of sampling. The primary data were collected from the respondents during the period of May, 2014. The survey was conducted over two hundred respondents from particular areas– Mohakhali and Niketan at DNCC. A structured questionnaire was prepared in the light of the objectives of the study which was filled in by direct interview.

4.2 Analytical Framework

4.2.1 Logistic Regression Model

Multinomial logistic regression model is used to identify the determinants of daily generated solar energy performance in Bangladesh. The model is described below:

Let Y_i denote the dichotomous endogenous variable for the i^{th} observation.

where, Y_i=1, if daily generated solar energy performance is maximum,

= 0, otherwise moderate or minimum

The linear probability model (LPM) is

$$P_i = E(Y=1|X_i) = \beta_1 + \beta_2 X_i \quad (1)$$

where, X_i is an exogenous variables and β_i is the regression coefficients. The method is to model the response using the logistic function given by

$$P_i = E(Y = 1lXi) = \frac{1}{1+e^{-(\beta_1+\beta_2 X_i)}} \quad (2)$$

$$P_i = \frac{1}{1+e^{-z_i}} = \frac{e^{z_i}}{1+e^{z_i}} \quad (3)$$

Where $Z_i = \beta_1 + \beta_2 X_i$ and Equation (3) represents what is known as the cumulative, logistic distribution function (Kramer, 1991). It is easy to verify that as Z_i ranges from $-\alpha$ *to* $+\alpha$, P_i ranges between 0 and 1 and that P_i is nonlinearly related to Z_i (i.e., X_i), thus satisfying the two requirements. If P_i, the probability of daily generated solar energy performance is maximum, is given by (3) then (1-P_i), the probability of daily generated solar energy performance is minimum;

$$1 - P_i = \frac{1}{1 + e^{z_i}} \tag{4}$$

Therefore, we can write

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{z}}{1 + e^{-z_i}} = e^{z} \tag{5}$$

Now P_i/1-P_i is simply the odd ratio in favour of daily generated solar energy performance – the ratio of the probability of daily maximum generated solar energy to the probability of daily minimum generated solar energy. If we take the natural log of (5), we obtain a very interesting result, namely,

$$L_i = In\left(\frac{P_i}{1 - P_i}\right) = Z_i$$

$$= \beta_1 + \beta_2 X_i \tag{6}$$

That is, L, the log of the odds ratio, is not only linear in X, but also linear in parameters. L is called the logit, and hence the name logit model.

$$L_i = In\left(\frac{P_i}{1 - P_i}\right) = \beta_1 + \beta_2 X_i + u_i \tag{7}$$

To estimate (7) the values of the regress and, or logit, L_i. If we have data on individual families, OLS estimation of (7) is infeasible. P_i = 1, if daily generated solar energy is maximum and P_i = 0, if daily generated solar energy is minimum. These values can be directly used into the logit, L_i, we obtain:

$L_i = In\left(\frac{1}{0}\right)$ if daily generated solar energy is maximum

$L_i = In\left(\frac{0}{1}\right)$ if daily generated solar energy is minimum

If we have data at the *individual, or micro level*, we cannot estimate (7) by the standard OLS routine. In this situation we may have to resort to the maximum likelihood method to estimate the parameters. Software packages, Eviews 5.1, have built-in routines to estimate the logit model at the individual level.

4.2.2 Determinants of Solar Energy Performance

Using the survey data a logistic regression model has been estimated to examine determinants of daily generated solar energy performance based on explanatory variables shown as below.

Dependent Variable:

Log of daily generated solar energy power	= 1, if daily generated solar energy power 520 watt (max), otherwise 130-170 watt or 10 watt (min)

Explanatory variables:

Year of uses of solar energy	‘1-2 years’, ‘3-5 years’, ‘5-10 years’, and ‘above’
Stakeholders of solar energy	‘household’, ‘business’, and ‘others’
No. of household members	‘<4 members’, ‘4-6 members’, ‘6-8 members’, and ‘above’
Provider of solar energy technology	‘government’, ‘NGO’, ‘IDA’ & ‘association’
Skills of solar energy dummy	= 1, if skill on solar energy, otherwise
Cost of solar energy technology	= 1, if high up-front costs of solar energy, otherwise
Amount of loan	‘nothing’, ‘<BDT 100,000’, ‘BDT 100,001 to 300,000’, & ‘>BDT 300,000’
Sources of borrowing	‘relatives/neighbours/friends’, ‘mahajans, ‘NGOs’ & ‘banks’
Rate of interest annually	‘<10%’, ‘10% to 15%’, 16% to 20%’ & ‘>20%’
Collateral for loan	‘nothing’, ‘land and building’, ‘machinery and equipment’, and ‘personal assets of owner’
Operational risks on solar energy technology dummy	= 1, operational risks and regulatory certainty, otherwise
Market information on solar energy dummy	= 1, market information is still largely available, otherwise
Insurance on solar energy dummy	= 1, if have any insurance on solar energy, otherwise

The expected sign of explanatory variable coefficients are positive and/or negative respectively. To verify the validity of the model, two major evaluation criteria were used: (i) the a – priori expectation criteria which is based on the signs and magnitudes of the coefficients of the variables under investigation and (ii) Statistical criteria which is based on statistical theory, which in other words is referred to as the Least Square (LS) consisting of McFadden R-squared (R^2_{MCF}), LR statistic (df) and Probability (LR stat).

5. Analysis of the Empirical Results

The regression results calculated by *E-views* are given in Table 1.

Table 1: Results of Logistic Regression

Method: ML - Binary Logit (total observations: 170)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	23.973	7.708	3.110	0.00
Amount of loan	0.849	0.264	3.212	0.00
Collateral for loan	-2.594	1.001	-2.578	0.01
Cost of solar energy technology	-3.185	1.027	-3.101	0.00
Insurance on solar energy technology	1.589	0.679	2.340	0.02
Market information on solar energy	1.211	0.447	2.709	0.00
No. of household members	-0.782	0.295	-2.651	0.01
Operational risks on solar energy	-1.565	0.471	-3.318	0.00
Provider of solar energy technology	1.301	0.268	4.854	0.00
Rate of interest annually	2.403	0.401	5.992	0.00
Skills of solar energy dummy	0.643	0.258	2.49	0.02
Sources of borrowing	0.818	0.245	3.029	0.00
Stakeholders of solar energy	0.575	0.211	2.725	0.01
Year of uses of solar energy	0.371	0.185	2.005	0.05
McFadden R-squared	0.668			
LR statistic (13 df)	93.575			
Probability(LR stat)	0.000			

Each slope coefficient in this equation is a *partial slope* coefficient and measures the change in the estimated logit for a unit change in the value of the given regressor, holding other regressors constant. The coefficient value of 23.973 with positive sign meaning that if an individual has no amount of loan, sources of borrowing, collateral for loan, market information solar energy, provider of solar energy technology, skills of solar energy dummy and others. Among the sources of borrowing, collateral for loan, market information on solar energy, and provider of solar energy technology have expected influences. To capture the effect of cost of solar energy technology (high=1) does have a significant impact because cost of solar energy technology is very high. The coefficient of stakeholders of solar energy is positive and highly significant. Thus, the household stakeholder, with other variables held constant, that if household stakeholder increases by a unit, on average the estimated logit increases by about 0.575 units suggesting a positive relationship between the two. Similarly, year of uses of solar energy has a positive impact on daily generated solar energy power in our equation, if a year of uses of renewable energy and energy efficient increases by a unit, on average the estimated logit increases by about 0.371 units.

Solar energy and energy efficient technology providers ('Government', 'NGO', 'association' and 'IDA') and the coefficient of dummy form (yes=1) "Skills of solar energy" is positive and significant. Solar energy technology drives up the returns to physical investment, ceteris paribus solar energy and energy efficient technology flow. Moreover, cost of solar energy technology also appears as an important complement of solar energy growth process. The coefficient of amount of loan is statistically significant. Similarly, the stakeholders may have sufficient scope for borrowing from 'relatives/neighbours/friends', mahajans, NGOs and banks. Collaterals for loan ('land and building', 'machinery and equipment', 'personal assets of owner') obstacle most of the solar energy stakeholders. The coefficients of sources of borrowing and collateral for loan are moderately significant.

The above results show that maximum or minimum daily generated solar energy performance has a high probability of being minimum generated of solar energy than the maximum generated of solar energy. Amount of loan has a significant coefficient and thus has advantage over the maximum generated solar energy technologies. Low cost solar energy technologies is better than high cost solar energy technologies, the later having significant positive impact on the logit, and rate of interest is sensitivity to log of daily generated solar energy power. The results suggest that other things remaining same, if high cost solar energy technologies become low cost, stakeholders will purchase more solar energy technologies. Market information on solar energy will have positive effect. This effect has been counterbalanced by a negative operational risks effect on solar energy productivity. The coefficient of dummy form (yes=1) 'insurance on solar energy technology' has positive impact and significant on solar energy productivity.

All together the regressors have a significant impact on the log of daily generated solar energy power, as the LR statistic is 93.57, whose *p-value* is about 0.00, which is statistically significant. A more meaningful interpretation is *in terms of odds*, which are obtained by taking the antilog of the various slope coefficients. Whereas the McFadden R^2 (R^2_{MCF}) value is 0.67, this value is overplaying the importance of goodness of fit, where the regressand is dichotomous and maximum generated solar energy technologies needs for power will increase substantially.

The energy market suffers from various problems: in adequacy of market information, existence of operational risks and regulatory uncertainty, high up-front costs of solar energy technologies, inadequate access to finance research and development, and perception of high investment risks by financiers. Financial institutions need to create a package to include total finance amount and the repayment terms, the interest rate, the repayment schedule and any guarantees or securities. The government should also be providing support for the successful solar energy projects. The challenge to develop environment friendly and socially acceptable methods for supplying the ever increasing demand for energy services in Bangladesh will be managed by developing energy efficient markets, simultaneously with the promotion and use of innovative technologies, and developing local energy efficiency expertise in the finance sector, expanding technical expertise and service providers.

6. Summary and Conclusion

The Bangladesh Government is promoting solar energy and energy efficiency in Bangladesh. The Renewable Energy Policy of Bangladesh, which was drawn up with assistance from GIZ and UNDP and adopted in December 2008, sets a target of satisfying 5% of total power demand from renewable energy by 2015 and 10% by 2020. The focal points for 'Sustainable Energy' development and promotion are renewable energy and energy efficiency. It has national security benefit as it reduces energy imports (i.e. increase government reserves) and gradually diminishing the rate at which domestic energy resources are depleted. As these progresses, Bangladesh Bank should also be involved to review their concessional refinancing schemes to encompass more products as well as review existing ones.

In recent years new financing models have been developed based on local capacity and higher involvement of consumers. The rationale behind these deals is to prepare young entrepreneurs. It can be expected that in the near future these emerging and still perceived high risky sectors will continue to rely at least partly on non-commercial investment. Eventually though, solar energy and energy efficient project development will have to be induced by market based incentives, allowing them to attract conventional sources of finance.

Appendix

A 1: Refinancing Scheme from Bangladesh Bank on Solar Energy, Bio-gas and Effluent Treatment Plant (ETP) Under the Following Terms and Conditions

Letter No., Circular No., and Date	A. Solar Energy	Description for Urban Area	Description for Rural Area
ACSPD Circular No: 06; October 03, 2009	Solar Panel Capacity	170 watt (min.) and 520 watt (max.)	Residential: 10 watt (min.) and 130 watt (max.) Commercial: 520 watt (max.)
ACD Letter No: 01 June 20, 2010, and	Maximum Loan	BDT. 60,000/= (min.) and 1, 75,000/- (max.)	Residential: BDT. 10,000/- (min.) and 70,000/- (max.) Commercial: BDT. 1,75,000/- (max.)
ACD Circular No: 09 April 08, 2010	Eligibility for loan approval	Individual/collective households/business institutions	Individual/collective households/business institutions
(Please follow ACSPD	Debt-Equity Ratio	Upon Bank-Customer relationship	Upon Bank-Customer relationship
Circular No: 06, October 03, 2009)	Interest rate at customer's end	Direct: current bank rate 5%+ Maximum 4%	Direct: current bank rate 5%+ Maximum 4%
SDP Circular No: 02 September11,2011 (Please follow		Credit wholesaling through NGO linkage: current bank rate 5%+ Maximum 5%	Credit wholesaling through NGO linkage: current bank rate 5%+ Maximum 5%
ACSPD Circular No: 06 October 03, 2009)	Loan repayment duration for customer and interest calculation	Principal and interest payment by 3 years; quarterly interest payment	Principal and interest payment by 3 years; quarterly interest payment
	Loan repayment duration under refinancing scheme	Principal and interest payment by 3 years; quarterly interest payment	Principal and interest payment by 3 years; quarterly interest payment
	B. Bio gas Plant	Establishment of plant within the existing farms	Integrated plant and cattle farm
	Bio digester	Production: 1.2m^3 (min.) and 4.8m^3 (max.)	Production: 4 Cows (min.) & 4.8m^3 (max.)

(contd.)

(contd.)

Letter No., Circular No., and Date	A. Solar Energy	Description for Urban Area	Description for Rural Area
	Maximum Loan	BDT 18,000/- (min.) and BDT 36,000/- (max.)	BDT 3,00,000/- (lacs) (max.)
	Eligibility for loan approval	Individual/collective households/business institutions	Individual/collective households/business institutions
	Debt-Equity Ratio	Upon Bank-Customer relationship	Upon Bank-Customer relationship
	Interest rate at customer's end	Direct: current bank rate 5%+ Maximum 4%	Direct: current bank rate 5%+ Maximum 4%
		Credit wholesaling through NGO linkage: current bank rate 5%+ Maximum 5%	if there is an agent/ intermediary working for bank then, current bank rate 5%+ Maximum 5%
	Loan repayment duration for customer and interest calculation	Principal and interest payment by 3 years; quarterly interest payment	Principal and interest payment by 3 years; quarterly interest payment
	Loan repayment duration under refinancing scheme	Principal and interest payment by 3 years; quarterly interest payment	Principal and interest payment by 3 years; quarterly interest payment
	C. ETP and HHK Plant	**Production & ETP Treatment**	**Bricks Capacity**
	Effluent plant (Chemical and biological ETP with local and import expenditure) and Hybrid Hoffman Kiln (HHK) Plant must Settle	Production: Daily 5 tons (min.) & 20 tons (max.) ETP Treatment: Daily 500m^3 (min.) and 2000m^3 (max.)	Single/Double Kiln 15 million (min.) and 30 million (max.)
		BDT 1,00,00,000/- (One crore) (max.)	Total Refinance Scheme BDT 30/- crore; Each Project 2/- crore (max.)

(contd.)

(contd.)

Letter No., Circular No., and Date	A. Solar Energy	Description for Urban Area	Description for Rural Area
		Direct: current bank rate 5%+ Maximum 4%	Direct: current bank rate 5%+ Maximum 4%
		Principal and interest payment by 5 years; quarterly interest payment	Principal and interest payment by 5 years; quarterly interest payment

Source: BRPD (Banking Regulation and Policy Department) Circular, Bangladesh Bank.

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Crimea Crisis: Beginning of a New World Order

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Abstract Crimean Peninsula's secession was decided in a highly controversial referendum. Later on Russia and Crimea signed a unification treaty. Afterwards there were debates about the Crimea crisis by academicians, journalists and various civil society members. Events like this can shake the international political order. This paper attempts to shed some light on the global politics in the light of Crimea crisis and also tries to unveil the impact of the crisis in shaping a new world order. In doing so, it highlights the debates on Crimean referendum and the interest of the major involving stakeholders like China, India along with Russia against the unipolar world order led by the United States of America.

Keywords Crimean Peninsula, Sevastopol, Black Sea Fleet, Referendum, Annexation, Interest, World Order.

1. Introduction

The present global order is the aftermath of the collapse of the Union of the Soviet Socialist Republic (USSR) in 1991. In the 21st century, the United States of America (USA) is dominating the world system through its economic system called capitalism. According to the proponents of realism theory, power plays the vital role in the existing anarchical system. Economic power of a country greatly determines its position in the world economy. China has now come out as the second economic power in the world economy. Side by side, India is rapidly getting more and more powerful economically. As a result, the continent of Asia is

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being increasingly considered as a great factor for determination of a new world order. The five economically powerful countries, namely Brazil, Russia, India, China and South Africa have formed the BRICS Bank which is poised to challenge the financial and technical power of the World Bank. On the other hand, Russia seems to regain its earlier super power position through its economic power and resources. Russia has keen interest for making strong bondage with her like-minded big powers. The annexation of Crimea by Russian Federation is one of the important steps towards the rebirth of bipolar or multi-polar world. The Western Europe led by the USA has strongly opposed the invasion of Crimea. They made reference to international law, the United Nations (UN) Charter etc. to make out their case against such act of Russia. On the other hand, the Russian Federation is demanding that she just respected the Crimean people's democratic rights. With this hindsight, this paper looks into the debate on Crimean referendum, interest factors of the USA, Russia, China, the Western Europe and even India. And then it tries to see how the Crimea crisis is ushering a new world order.

2. Background of the Crimean Peninsula

The Crimean peninsula is known as Crimea. It is situated in the Eastern Europe and is co-ordinated at 45.3°N and 34·4°E. This peninsula has a major land mass on the coast of the adjacent bodies of Black Sea which is almost surrounded by the Black Sea and Sea of Azov. It is located in the south of the Ukrainian mainland and in the west of the Russian Khuban city. It is connected with the Ukrainian mainland through Isthmus Perekop and is isolated from Khuban by the Strait of Kerch. There are basically three types of ethnic people named Russian, Ukrainian and Tatar. Most of the Tatars are Muslim. Russian language is the lingua franca in the Crimean territory. The Crimea has local governing autonomy according to the local constitution. But it is ultimately subject to the Ukrainian constitution and law. Sevastopol is the largest city having own autonomy.

Crimea was known as 'Tauris' in the ancient period. The Tauric tribes were firstly absorbed by Cimmerian and then Scythian invaders who were later pushed back from the coast by Greek colonists in the 6th century BC. It was occupied and colonized repeatedly by Greeks, Romans, Huns, Goths and the Byzantine Empire in the ancient world. The Greeks could not succeed to take over the whole Crimean peninsula. The peninsula was the main source of wheat for ancient Greece. The Romans came in the peninsula in the 1st century AD. In the 13th century, Crimea was occupied by the Tatars-Turkic-speaking Muslims who were part of the Golden Horde, a branch of the Mongol Empire established by a grandson of Genghis Khan. They established their own state named 'Khanate of Crimea' which was the main center for the medieval white slave trade. The Crimean Khanate became the vassal state of the Ottoman Empire in the 15^{th} century, but also a power in its own right, claiming territory in what is today Russia's Caspian-volga region. Crimea was conquered by the Russian Empire in 1783 (VOA, 2014). The Russia amalgamated Crimea and built a warm water navy and constructed a port of Sevastopol for accommodation. The Crimean war occurred between the Russian Empire and an alliance of Great Britain, France, Sardinia, Ottoman Empire and Turkey from 1853 to 1856. The allied forces took the city of Sevastopol of Crimea. During the Russian civil war, the Crimean Peninsula was made part of the Soviet Union in 1921 as a Crimean Autonomous Soviet Socialist Republic (ASSR) for the Crimean Tatars within the Russian Soviet Federative Socialist Republic (RSFSR). The Crimean peninsula was occupied by Adolf Hitler's Nazi party of Germany from July 1942 to May 1944. President Joseph Stalin of USSR deported all the Crimean Tatars to the Central Asia in 1944 and other parts of the Soviet Union for their alleged collaboration with Hitler's Nazi party. After the Second World War, Soviet President Joseph Stalin officially abolished the Crimean Tatars as a nation, and organized the mass deportation of the entire Tatar population some 220,000 people – to Central Asia, along with 70,000 Crimean Greeks. It was not until 1956, when USSR Premier Nikita Khrushchev denounced the Tatar deportation in his speech attacking Stalin's legacy, that there was any official recognition of the terrible wrong done to the Tatar people and others. It took until the fall of the Soviet Union in the 1990s, for Tatar families and members of other deported groups to be allowed to return to Crimea in significant numbers (2014, History). Some estimate that 40-50 per cent of the Tatar population died during the process of deportation and exile (Subtelny, 2009). The autonomous status was abolished in 1945 and the Peninsula became an ordinary oblast within the RSFSR in 1954. And it was transferred in 1954 to the Ukrainian Soviet Socialist Republic (SSR) by the former Soviet Premier Nikita Khrushchev who was born in Ukraine and was leader of the Communist party of Ukraine. The decision of transfer of this Peninsula was unanimously passed as law by the former USSR Supreme Soviet. Mr. Khrushchev is still blamed for this tragedy of Russia. Thirty seven years later, the USSR collapsed in 1991 and then Ukraine declared its independence and the Crimean Peninsula became the part of Ukraine. Russia and Ukraine agreed to divide up the former Soviet Black Sea Fleet. Crimea's port city of Sevastopol remains the base for Russia's Black Sea Fleet. In the early 1990s Crimea stood on the brink of conflict and nearly became a hotspot similar to the Caucasian regions. Two crises occurred between Ukraine and Crimea; one in May 1992, when the Peninsula declared sovereignty and adopted a secessionist constitution, and one during the first half of 1994, when Yuriy Meshkov, a Russian nationalist leader, was elected Crimean president and Russian nationalists came to power in the Crimean parliament (Kuzio, 2007).

The status of Sevastopol of direct subordination to Moscow did not change when the erstwhile USSR government transferred Crimea to the Ukrainian SSR in 1954. The revisionist arguments ignore the legal situation that has existed since 1991 with international recognition of Ukraine's sovereignty in Crimea and Sevastopol and the fact that Russia itself recognized Ukraine's sovereignty in the 1997 interstate treaty, the 1997 treaty on stationing of the fleet and the 2004 Russia-Ukraine treaty on the mutual border (Socor, 2008). The Crimean port city of Sevastopol was one of the twelve Hero Cities in the former USSR. On 20 May, 2008, Yushchenko issued a decree whereby he committed the Government to draw up the draft law on the removal of the Black Sea Fleet in 2017 (Tymoshenko, 2008). Prime Minister Yanukovych in October 2006 suggested that Russia may be able to use the naval base in Sevastopol beyond 2017 (Yanukovych, 2006). He also said he believed that the location of the base of Russia's Fleet in the Crimea benefits Ukraine, since it has a positive effect on bilateral Ukraine-Russia relations, and generates revenues into Ukraine's state budget (Yanukovych, 2008). At issue was the parliament's ratification of a lease extension for Russia's Black Sea Fleet in the Ukrainian port of Sevastopol, Crimea. The lease was due to expire in 2017, but will now continue through 2042. In exchange, Ukraine will receive a roughly 30 percent discount on natural gas imports from Russia, worth up to $40 billion over 10 years (Medetsky, 2010).

3. Debate on Crimean Referendum

The Crimean referendum held on March 16, 2014 gave rise to debates at several levels: at the state level, at the Inter Governmental Organizations (IGOs) level, and at the level where the civil society members, lawyers and former diplomats and others are involved. The outcome of the referendum was the secession of Crimea from Ukraine and an overwhelming 96.7% vote in favour of the region's accession to Russia. About 93% of Crimean voters backed the motion of joining Russia and seceding from Ukraine. On the ballot paper, voters were asked whether they would like Crimea to rejoin Russia. A second issue of voting was concerning whether Crimea should be returned to its status under the 1992 constitution, which would give the region much greater autonomy.

There was no option for those who might prefer constitutional right to revert to its former status. Ethnic Tatars, who constitute about 12 per cent of the population, mostly boycotted the election. The European Union said the vote was "illegal and illegitimate and its outcome will not be recognized." Russian president Vladimir Vladimirovich Putin told German Chancellor Angela Markel that referendum on March 16, 2014 was legal and Moscow would respect the result. Ukrainian Prime Minister Arseniy Yatsenyuk warned that the authorities would track down separatist "ringleaders." He also said, "We will find all of them– if it takes one year, two years – and bring them to justice and try them in Ukrainian and international courts" (BBC, 2014). The parliament of the Autonomous Republic of Crimea declared its independence from Ukraine by holding a March 16 referendum in the following way: "We, the member of the parliament of the Autonomous Republic of Crimea and Sevastopol City Council, with regard to the Charter of the United Nations and a whole range of other international documents and taking into consideration the confirmation of the status of Kosovo by the United Nations International Court of Justice, on July 22, 2010, which says that unilateral declaration of independence by a part of the country doesn't violate any international norms, make this decision" (RT, 2014).

This decision was taken in the extraordinary session of the Crimean parliament where 78 out of 100 members voted in favour of the resolution, 8 refrained from voteing. This declaration of annexation of the Crimean Peninsula was also approved by the Russian parliament, Duma by 445-1. The Articles 72, 73, 85 and 134 of Ukraine's constitution clearly stipulate that the status of any part of the country's territory can only be changed as the result of a nationwide referendum. This referendum was declared unconstitutional and illegal by the Constitutional Court of Ukraine. The Crimean elected government in 2010 was pro-Russian that commanded no popular mandate. The timeframe for the referendum has been changed twice: originally scheduled for 25 May, it was brought forward to 30 March and then again to 16 March. The composition of local electoral commissions, voters' lists and ballot papers etc. were allegedly not maintained properly. The referendum took place at ten days' notice only and in the presence of thousands of troops from a foreign country. The local media was in favour of pro-Russian camp. The pro-Russian militia groups are said to have intimidated potential pro-Ukrainian voters and forcibly confiscated or destroyed their Ukrainian documents. The referendum took place in the absence of any meaningful monitoring by impartial domestic or international observers. The Organization for Security and Co-operation in Europe

(OSCE) did not observe the referendum. The vote was monitored by observers from fringe parties (Smith, 2014:1-3). President Obama told president Putin during a phone call on 16 March, 2014 that "Russia's actions were in violation of Ukraine's sovereignty and territorial integrity." Mr. Putin said the situation in Crimea is akin to Kosovo's breakaway from Serbia in 2008 (Abdullah, 2014).

On March 3, 2014 the Russian ambassador to the UN announced the content of a letter from Viktor Yanukovych to the president of Russia, dated March 1, which requests Russian intervention. He (ambassador) called on President Putin of Russia to use the armed forces of the Russian Federation to establish legitimacy, peace, law and order and stability in defense of the people of Ukraine. Also on March 1, the Prime Minister of Crimea appealed to Russia "for assistance in guaranteeing peace and calmness on the territory of the autonomous republic of Crimea" (Fox, 2014). According to international law, there are two key factors related to the declaration of independence of a particular part of a state. The first factor is the action of the state within whose borders the people live. Second, the response of the international community. In relation to first factor, if the state is oppressing the people, discriminating against them, violating their human rights and not allowing them freely to be involved in the politics and the internal affairs of the state, as was probably the situation in Kosovo, then international law allows them a range of possible actions including independence and merging with another state. Canadian Supreme Court did not deny the meaningful access to government to pursue their political, economic, cultural and social development and so the people of Quebec do not enjoy a right of international law to effect the secession of Quebec from Canada unilaterally. They went further to make clear that the referendum result by itself would have no legal effect on its own without further negotiation with the people of the rest of Canada. This is also relevant to the people of Scotland as they voted in their referendum. The response of the international community can be significant in terms of the recognition (or not) of the entity as a state. Indeed, Russia has not recognised Kosovo as a state (Hausler and McCorquodale, 2014).

Ukraine raised a issue about Crimea in the United Nations' 68th General Assembly on March 27, 2014. By a recorded vote of 100 in favour to 11 against, with 58 abstentions, the General Assembly (GA/11493) adopted a resolution at the 80th meeting titled "Territorial Integrity of Ukraine," calling on states, international organizations, and specialized agencies not to recognize any change in the status of Crimea or the Black Sea port city of Sevastopol, and to refrain from actions or dealings that might be interpreted as such. Many members of the UN said the referendum contravened international law, the UN Charter and Ukraine's Constitution, emphasizing that they would neither recognize it nor the Russian Federation's subsequent illegal annexation of Crimea. Andrii Deshchytsia, Acting Minister for Foreign Affairs of Ukraine, introduced the draft resolution (document A/68/L. 39), saying that the reasons for the presence of all delegations present today was an issue of paramount importance; of crucial importance for his country and of vital importance for every UN member state, even more so for the UN and the world order it embodied. He recalled Russia violated the Budapest Memorandum in 1994 by annexing Crimea. However, Russian Federation's representative Vitaly I. Churkin told Crimea had been reunified with the Russian Federation by the referendum on 16 March, 2014. He argued "we call on everyone to respect that voluntary choice." The US representative Samantha Power told that the draft resolution was about only one issue: affirming a commitment to the sovereignty, political independence, unity and territorial integrity of Ukraine. Liu Jieyi from China emphasized the importance of a balanced approach. The European Union did not recognize the referendum in Crimea which was considered a violation of Ukraine's Constitution, and strongly condemned the illegal annexation of Crimea and Sevastopol to the Russian Federation (UN, 2014). Russia vetoed the UN Security Council resolution on the Crimean referendum which was passed with 13 of the 15 members and China refrained from voteing.

According to Article 73 of the 1996 Constitution of Ukraine and Article 3 of the 2012 Ukrainian law "On all-Ukrainian referendum," territorial changes can only be approved via a referendum where all the citizens of Ukraine are allowed to vote, including those that do not reside in Crimea. The Central Election Commission of Ukraine also stated that there are no judicial possibilities, according to the legislation of Ukraine, to initiate such changes (Wikipedia, 2014). The US-led coalition invaded Servia in 1999, Afganistan in 2001, Iraq in 2003 and finally Libya in 2011 without the approval of the UN Security Council. These are the precedents that support Russia to amalgamate the Crimean Peninsula. In fact, powerful actors such as the US, Russia, the EU and NATO support the rules and regulation of the international organizations like the UN while these are in favour of them and disregard when these works against their interests.

4. Interest Factors

Crimean Peninsula is one of the attractive tourist spots and strategically important area of the Europe. There are different sorts of interest factors in this Peninsula which attract the attention of the great powers.

Geographical location of this land is the vital issue for the adjacent countries of Crimean Peninsula. By this territorial aspect, Russia can easily monitor the strategic movements or actions of any other foreign actors in the Black Sea. This is the gateway for Russia to build connection with the Mediterranean Sea. There are a number of tactical sea ports in Crimea such as Sevastopol, Kerch, Yalta etc. There are a huge amount of natural resources in the Crimean Peninsula. Western European countries are crucially needed to import natural gas from Russian Federation. So the international community is worried for political instability and invaded Crimean Peninsula by Russian Federation.

4.1 The US's Interest

The USA has been cherishing for long time to establish its dominance in the Black Sea region. Turkey, the ally of the North Atlantic Treaty Organization (NATO), has expressed its disagreement to lease a naval base in her Black Sea shore because of the continuous effort of the USA to establish its supremacy in the neighbouring countries of Russia and Black Sea area. The relationship between the USA and Russia has reached at the lowest level after the end of cold war. The US and its Western European allies are laboriously trying to persuade Ukraine and Georgia to become member of the NATO very specifically for their strategic partners. The US government mainly tries to control the rise of Russia regionally by taking cold war type strategy. Bilateral trade between Russia and USA is only 3.4 per cent of total Russian trade. The core interest of the USA is not trade issue rather than strategic dominance in the Eastern European countries as well as preservation of the interest of its Western European allies.

The tension between the USA and Russia has spurred on the rise of Vladimir Putin as an iron statesman of Russia in the post Soviet politics after the 1998 presidential election of Russian Federation. During the first decade of his power in Kremlin, president Putin was thought more assertive position in the field of cooperation with the USA. Since May, 2014, president Putin began his third term as a president, the relationship between USA and Russia becomes more confrontational than before because of two main factors. Firstly, Russia thinks that the war in Syria might spread to the Caucasus region of Russia. Secondly, Russia's decision to grant asylum of Edward Snowden was another issue to worsen the relations between two countries. Very recently, Russia banned USA citizen to adopt Russian children. In September 2012, Russian authorities kicked out the United States Agency for International Development (USAID). In a poll of levada of 2012, 76 per cent of Russian said that the USA is an aggressor that aims to control the world. In

2008, Russia attacked Georgia by avoiding the norms of international law. But the USA supported Georgia. This is why the USA is considered the close ally of Georgia. Russia and China do not support the UN Security Council to take any decision for imposing sanction against Iran and Syria. Scholars/Pundits believe that president Putin is a supporter of Asia centric world order where Russia will be the equal partner of Asia to lead the world. Side by side the USA is trying to speed up the anti-Russian sentiments in the neighbouring states of Russia to contain the influence of Russia in the Eastern Europe as well as to safeguard its interest.

4.2 The Russia's Interest

Russia re-emerged as a great power in the international politics because of its military power and abundant natural resources mainly natural gas. "Russia is the world's largest state by land area and physically dominates the Eurasian landmass. It also has large reserves of important industrial raw materials. In mercantilist terms Russia is at least a potential Great Power" (Agnew and Corbridge, 2003). Modernization of Russian forces and enhancement of military budget are the sign to safeguard any attack from the American block. Russia adopted new military doctrine in 2010. The NATO is treated as the biggest external threat for Russia. At present, Russia has the third largest military budget with 800,000 soldiers as well as allocating 4.4 per cent of its GDP for military budget. Crimea is an extension of Ukraine but demographically and politically this part is really controlled by Russia. There are continual more debates in the international community whether Russia is aggressor or protector of Russian-speaking people in the Crimean Peninsula. This crisis can be designated as a new type of cold war. Russian speaking people in Crimea felt very vulnerable condition after Ukrainian President Viktor Yanukovych fled to Russia. New pro-Western government had declared to pass anti-Russia law in the Ukrainian parliament. President Putin was actually supported by the Russian people and most of the Crimean inhabitants for amalgamation of Crimean Peninsula with Russian Federation.

The annexation of Crimea is similar to the case of South Sudan which was separated from Sudan and East Timor was also isolated from Indonesia because of aggression of the central governments of the two countries. In this connection it can be argued that the inhabitants of Crimean Peninsula are facing new sorts of growing threats from Ukrainian government.

In order to know the Russian public opinion about the annexation of Crimea, it is necessary to look at the following six myths concerning

Crimea annexation mentioned at The Moscow Time by the opinion page editor Michael Bohm:

- All great powers annex territory. Look at the US, which unabashedly annexed Texas and Hawaii.
- Agreements can be annulled if the president who signed them was weak.
- Crimea wasn't "annexed." It was "unified" with Russia, just like the German unification in 1990.
- Russia needs to defend the interests of Russian speakers in Crimea.
- Russia adheres to the United Nations principle that military intervention in another country is justified only with the approval of the UN Security Council.
- The US has no moral right to condemn Russia for violating international law in Crimea, Bohm, 2014: 2-4.

Nonetheless, Crimean elite has their own commercial interest to join Russia. Alcohol related business is very popular in the Crimean Peninsula. Every year a significant number of Russians visit this Peninsula. Crimean tycoons export huge amount of alcohol to Russia. To flourish their business, Russia is better option rather than Ukraine. Long time relationship between Russia and Crimea is another important conspicuous factor for playing vital role in the voting behaviour of the Crimean people.

4.3 The Western Europe's Interest

Western Europe is the adjacent neighbour of Ukraine. After the Soviet Union's break-up in December 1991, 20 million ethnic Russians lived outside Russia in the newly autonomous 14 Republics but no wave of migrants fled "home" to escape local ethnic assertiveness (Kinsman, 2014). There is one popular debate surrounding the domestic politics of Ukraine which is that whether she joins the NATO and European Union (EU) or integrate with Russian economy. The boiling-point in the Ukrainian politics was the rejection to sign a treaty with EU during the president Viktor Yanukovych regime. The flame of protest was spurred on among the young generation after the government disagreement to sign an economic treaty with EU. Western Ukrainians are nationalistic and anti-Russian in nature. On the other hand, Eastern Ukraine is dominated by the pro-Russian people. This short of cleavage in domestic politics is a dilemma for the Ukraine. The EU is a single platform of Western European countries. After the collapse of USSR, the EU has opened its membership for the former USSR satellite states in the East

Europe and Baltic region. The main actors of the EU are Britain, Germany and France. Russian Federation has a constructive engagement with many EU member states bilaterally. As a result, after the Russia's incursion in Crimea, EU member states have faced a state of dilemma regarding imposing sanction against Russia. During the Asia-Europe Meeting (ASEM) in the Milan city of Italy on 16-17 October of 2014, French president Francisco Hollande and German Chancellor Angela Markel mediated to persuade the Russian Counterpart Vladimir Putin to sign a gas deal with the Ukrainian president Petro Poroshenko. Ukraine is the hub of agricultural production. Ukraine sends 20% of its agricultural products including non-food products to neighbouring Russia while the European Union takes 17 per cent. The Europe needs Russian oil and gas. Russia supplies 40 per cent of Europe's oil and gas; 80 per cent of that goes through Ukraine (Logan, 2014). Concerning the EU's energy policy we must not forget that there are reciprocal links between the Union and Russia. Although Europe needs Russian gas, Russia cannot survive without the revenues of its energy exports (Mykola, 2014).

4.4 The China's Interest

"China is becoming more central to world politics as the 21st century begins. China is the only great power from the global South"(Goldstein and Pave house, 2011). Chinese diplomats expressed their decision for dealing the Crimea issue after the referendum. China has shown 'double standard' policy on Crimea crisis. Firstly, Chinese diplomats said that they would support the territorial integrity of Ukraine. On the other hand, China abstained from any decision against Russia in the UN Security Council as well as UN General Assembly. China applies very tactic role on Crimea issue. In the short-term, China will get benefit from this crisis. But in the long-term, China has to face security challenge in the Central Asia. Russia's main argument for annexation of Crimea is to ensure protection of ethnic Russian, currently living in Crimea. These sorts of analogy can be applied in the Central Asia by Russia where significant numbers of ethnic Russian live. If Russia sponsors various separatist group of Central Asia, China will face vicious situation because currently Chinese firms are the dominant in the various development projects of that region. Igor Sechin, Russian President Vladimir Putin's top energy boss, told that "China may benefit from the events in Ukraine. An isolated Russia subjected to Western sanctions will be far more willing to sell oil, gas and weapons to China on preferential terms" (Eyal, 2014).

Russian President Vladimir Putin's recent visit to China is a sign of major shifting in international politics. Chinese president Xi Jinping chosed Russia as his first foreign country for visit and attended the

2014 Winter Olympics in Sochi that was hosted by Russia. President Putin's visit to China is very important for several reasons. First of all, Russia is facing a heavy sanction from Western countries because of its seizure of Crimean peninsula. Russia is searching alternative market for exporting natural gas. China is a big option in this regard. For this reason, Mr. Putin has signed multi-billion dollar, 30-year gas deal with China, which is called a historic and milestone step in the case of Russia-China relations. Secondly, China is concerned for growing presence of the US army in the East Asia and South East Asia for instance Japan, South Korea, Taiwan and Philippine. China is eager to take long-term strategic manoeuvre along with Russia to diminish influence of the USA in the South East Asia. Thirdly, Russia is influencing China to build up constructive relations with Iran and Syria. Fourthly, China is one of the largest trading partners of Russia. Russia's bilateral trade with China was about USD 90 billion in 2013. The two neighbours aim to double the volume to USD 200 billion in 10 years. According to Vladimir Yevseyev, the director of the Centre for Socio-Political Studies, "China has serious intentions for improving relations with Russia. Certain steps are made for this in the economic sphere. We can say that China wants to buy not only our natural gas, but also nuclear fuel made in Russia for Chinese Nuclear power plants. It seems it means extension of military technical cooperation, probably even establishing joint enterprises. We are stepping into a new level of relations" (Rashid, 2014). Finally, Russia and China have confrontational relations with Japan for various reasons. Japan is a close ally of USA in the Pacific region near to the Russian and Chinese border.

4.5 The India's Interest

From the very beginning of the Crimea crisis, India maintained distance from the West in criticizing the Russia. Indian External Ministry made it clear that India would not support any unilateral measures against Moscow. The Indian Daily News Paper 'The Hindu' questioned the effectiveness of the Western sanctions against Russia, saying that "no Western bloc may be able to stop the dismemberment of Ukraine and prevent the start of a new cold war" (RPI, 2014). India is a close friend of former USSR which is now Russia. India and Russia maintain deep cooperation on political, military and economic dimensions. Russian trade with India is larger than Indian trade with the USA. Indian companies have made huge investments in Russian energy firms. In addition the two nations are developing the Southern route from Russia to the Arabian Sea that will increase Russian trade in the whole of the Indian Ocean region. "Russia still provides India's military with more than 70 per cent of its weapons systems and armaments and the two are currently cooperating in the development of cruise missile systems, strike fighters and transport aircraft. Russia is one of only two countries in the world that have annual ministerial-level defense review with India. They have bilateral nuclear agreement worth potentially tens of billions of dollars" (Starvers and Harris, 2014). Russia extended its hand during the 1971 Indo-Pakistan war. Russia supported the unification of the Sikkim with India during 1975. Sikkim was annexed after 97.5 per cent of its inhabitants voted to bring the monarchy to an end and unite with India. Diplomatic backing from the Soviet Union was extremely important to India at that time (Sahni, 2014). Indian tycoons invest a huge amount in the industrial sectors of Russia after the end of the cold war. Putin's actions in Crimea have been criticized widely by the civil society as well as Western countries. India is one of the prominent democratic countries of the world that shows mild reactions after the referendum.

5. The Changing World Order

"The Westphalian system does not provide a good way of handling resources. Indeed, the very mixed interests between resources and national requirements may exacerbate tensions among countries and so help lead to armed conflict" (Suter, 2003). One may complain about Putin's decision for deploying or sending army to the Crimean Peninsula for the protection of the ethnic Russian living there. But the same objection was raised against the US government decision for sending army in Granada in 1983 for protection of the US citizen. In 1960s, the USA sent troops in the Dominican Republic. In 1953, Mohammad Mosaddeq, democratically elected president of Iran, was forcedly ousted from his office by US agent. During the tenure of the president Reagan, the USA supported the civil upheaval in the Nicaragua. Protecting US citizen and promoting national interests were the major accusation of the US government to legitimate the attack. Furthermore, one may complain about the forceful annexation of Crimea by Russia. But the USA did the same when she annexed the California, New Mexico, and Texas and finally Hawaii. "George Bush appropriated the phrase 'new world order' as a rhetorical cover for his war in the Gulf" (Chomsky, 2005). Historically, Crimea was the part of Russia for so many years. But Hawaii and other newly joined state of USA was not the part of the USA (Feinberg, 2014). India as well as other BRICS member states abstained from voting in the UN General Assembly on March 27, 2014. Russia supported the inclusion of India as a permanent member of the UN Security Council. The position of India during the post Crimean referendum was in favour of Russia. It was unwelcoming for the liberal democratic supporters of the Western Europe and the USA. Both Russia and India share the same view regarding multipolar world order and agree to deter the unilateral decision of the USA in major issues of international politics.

There are basically three types of world order systems in the world history, namely multipolar world order, bipolar world order and unipolar world order. Multipolar world order existed before the Second World War. The cold war period was the ripe moment for bipolar world system between former USSR and USA. The USA has been enjoying the unipolar decision making power in the international politics after the collapse of the Soviet Union. The USA did whatever she desired to do in the last two decades. “Russia emerged not as a renamed Soviet Union, but rather as a state with its own history and symbols, a member of the international state system that had been absent for some time, but had suddenly returned. And the reborn Russia seemed to be dedicated, in its own way, to the same goals as its post-soviet neighbours: membership in Western institutions, a market economy, and a multi-party parliamentary democracy, albeit with a Russian face” (Hill, 2014). In 2008, Georgia crisis was considered as a break-through for Russia to re-emerge as a great power in the global politics. After 2008 Georgia crisis and 2014 Crimean referendum, Georgia and Ukraine face serious strategic problems for the West. Yet in theory, the West wants to integrate them into their institutional network. But in reality, the West is not ready to die for them. President Putin knows it. American foreign policy makers are seriously confused. The perpetual talks as advocated by the conservative leadership of a missile defense shield, kicking Russia out of the G-8, boosting military spending, undermining international institutions and so on are unproductive. In recent decades, the USA is more interested to take policies which might isolate Russia rather than engagement. Even during the height of hostility in the cold war period, Washington and Moscow were in constant communication and some real important arms agreements, like Strategic Arms limitation Talks (SALTs), were signed by the excessive and legislative policy (Larive, 2014).

The US has failed to intervene in Syria and Iran because of Russia’s veto in the UN Security Council. Russia grabbed Crimea by ignoring international law. Russia broke up the 1994 Budapest memorandum when Ukraine gave up their nuclear ingredients to Russia for protection of her territory from any other attack. Three factors allowed president Putin to annex Crimea easily and without bloodshed. The first was the power of the Russian forces already legitimately stationed in Crimea. The second was the approbation of the ethnically and culturally Russian population in Crimea, which has longed to regain its place as part of the Soviet Empire. The third was the weakness of the interim government in Kiev, which was still being formed when Putin struck. Putin's new world order, in short, is built on revanchism, a reckless disdain for the truth and the twisting of the law to mean whatever suits those in power. That makes it no order at all (The Economist, 2014). The member state of the EU has failed to take hard line policies against Russia after the amalgamation of Crimea because of their internal division. The EU has been facing dilemma since 2000 for taking any decision against Russia. Russia has been sponsoring by various means to accelerate cleavage among the member states of EU in order to assert its power and influence. After the grabbing of Crimea, the EU has made division on several major issues for instances on the degree of severity of sanctions, types of manoeuvres to address Moscow and Kiev relations and on how to use power etc. It is clear that the United Kingdom (UK), France and Germany have different kinds of approaches toward Russia.

Alexander Prokhanov wrote a book 'The stride of Russian victory'. It emphasizes that Moscow is promised to establish a new empire which he called the fifth empire in its history, based on Putin's vision of a "Eurasian Union" of former Soviet states. In the opening chapter of the book, he argues "Russia will shake off American's decrepit hegemony and take back the emptied geopolitical spaces….Herein lies Russia's imperial chance, the rise of her imperial destiny" (Shuster, 2013). "The post-Crimea world order, hence, will be different from the world order prevailing during the cold war or during the early 1990s. The proliferation of international power and the rise of India and China, and the groupings like BRICS, will shape the world order post-Crimea. Russia's close relationship with these two countries will help it in the crisis" (Mahapatra, 2014). Western members of the G-20 are continuously pressuring to sack Russia from the existing economic umbrella. But BRICS enlisted countries have given their support to keep Russia as a member of G-20. Thus, establishment of BRICS bank is leverage for Russia. "A number of scholars and policymakers predict that a system of multipolarity will emerge. Some of the states frequently mentioned as potential members of a future power balance known as multipolarity will include the United States, China, the European Union, Japan, India, and a reinvigorated Russia" (Kegley, 2007).

6. Conclusion

World Politics is not likely to remain in the same form after the annexation of Crimea by Russia. The unresolved debate on Crimean referendum lingers among the great powers. Russia's action in the

Crimean Peninsula has raised hue and cry. The unipolar world order led by the United States is waning day by day because of its undemocratic or autocratic decision and failed to implement its policies in many parts of the world. Although Western countries are divided about recent Ukrainian issue, most of them are principally agreed to integrate Ukraine with the EU. Ukrainian crisis permits to draw an analogy between the US and the EU. First of all, the USA has failed to contain Russia in the recent past and the EU is confused about the issue. Secondly, the Crimea crisis brings forth the importance of working together on the part of the USA and the EU. The Crimean issue sends message to Beijing and other emerging powers that the Western countries are not always capable to safe their allies. This points to the relative decline of the Western powers in the international political arena. Russia is expected to strengthen her economic and trade relations with the BRICS member states, Middle and Eastern Countries and other by shifting its economic involvement from the West. If the USA and Western countries invite Russia in the negotiation process along with representative from Ukraine, Crimea will bring positive outcome for the involving stakeholders. Only the Ukrainian and Crimean people will take decisions. The USA and Western countries should not run their continuous support to the Eastern European countries against Russia. Otherwise, East-West conflict will continue for indefinite time.

Russia is supporting Ukrainian separatist to destabilize the Eastern region of Ukraine. Russia's secret service agents are sponsoring the pro-Russian separatist of northern parts of Ukraine to divert attention from Crimea to Eastern Ukraine. Because of Russian propaganda and secret aggravation mission, Ukrainian government's attention is becoming more engaged in the Eastern part. If the USA is not successful to make trustful relations with Russia, it will produce a new unwelcoming world order. In many ways, Russia will be more beneficial rather than the USA from such a game. China, India and other rising super powers may enjoy these sorts of leverage too. The new establishment of BRICS Development Bank is a sign of change in the international politics from unipolar to multipolar world order. In the meantime, China moves ahead to establish a new development bank known as the Asian Infrastructure and Investment Bank (AIIB). Bangladesh, India, China and Myanmar-Economic Corridor (BCIM-EC) was formed as a sub-regional grouping. BCIM-EC is to deepen friendly co-operation among the member countries linking South Asia with South-East and East Asia by building multi-model connectivity and harnessing economic complementaries. These institutions will work as a 'soft power' for China. Thus it is another move of the rising super powers against the US hegemony in the world politics. Russia along with China and India share similar views about the multipolar world order. Thus the role of China and India at the regional and continental levels and economic governance in Asia are seen to be pro-Russian. The future of world politics is depending on the behaviour of the USA. The decision makers of the White House need to take into account the concerns and interests of the other global powers.

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Some Thoughts on Risk Management of Banks

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Abstract Risks are part of all businesses including the banking. The paper presents some thoughts, based on long time banking experience, to bring to focus various risks attached to banking activities. It then offers activity-wise suggestions in broad terms to address the issues.

Keywords Risk Management, Risk Mitigation, Credit Appraisal, Liquidity Risk, Internal Audit.

1. Introduction

When a bank makes an investment decision, it exposes itself to a number of financial risks. Different types of risks are attached to different categories of assets. As such banks, being service-oriented industry, are facing various challenges attributable to increased competition and expansion of diversified business networks. In considering these, in the nineties Lending Risk Analyses (LRA) were introduced under Financial Sector Reform Programme (FSRP) followed by detailed guidelines issued by Bangladesh Bank for all banks and subsequently the idea got wider acceptance. Presently, Basel I and Basel II Accords are in force. Basel II recommends banking laws and regulations for stability, safety and soundness of banking system. In order to keep the banking sector in stable and good condition, Bangladesh Bank issued circulars and advised banking industry to identify the risk factors associated with their business and to take effective measures in the financial process to minimize and control risks in the area of lending, internal control, liquidity and treasury management. The process involves identification of key risks inherent in business activities, analysis and assessment of identified risks, parameter setting for risk measurement, control and mitigation of risks,

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setting up appetite and tolerance level for formulation of risk strategies, and monitoring and reporting for decision making.

Risk management process requires that risk management desks in different tiers collect data from various related sources and verify the accuracy and completeness of the data. Analyzing the data, parameters are set to assess the level of risk involved and actions are taken accordingly.

2. Risk-Related Activities

It is important for bank management to single out activities containing risk elements. Risks of various natures and degrees are associated with different activities. Management of such activities and related risks are discussed below.

2.1 Credit Risk Management

Credit risk is simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Credit risk can be associated with both on-balance sheet and off-balance sheet activities. It may arise due to inability or an unwillingness to perform according to pre-committed contracts. Credit risk comes from a bank's dealing with individuals, corporate bodies, banks and financial institutions or a sovereign government. Assessment of credit risk involves evaluating both the probability of default on the part of the borrower as well as financial impact on the bank in the event of default.

Credit risk occupies the lion's share of banks' overall risks. Thus credit risk management turns out to be a vital issue in respect of risks' overall management and essential to the long-term success of banking organizations. Bank's objective of credit risk management is but maximization of risk-adjusted rate of returns by maintaining credit risk exposure within acceptable norms. To this end, banks are requested to adopt appropriate policy, methods and procedures to manage the credit risks inherent in various portfolios as well as risks in individual credits or transactions.

Credit risk management practices may differ among banks depending upon the nature and complexity of their credit activities. A comprehensive credit risk management programme will address five areas, namely– establishing an appropriate credit risk environment, operating under a sound credit-granting process, maintaining an appropriate credit administration, measurement and monitoring process, and ensuring adequate controls over credit risk. These practices should also be applied in conjunction with sound practices related to the assessment of asset quality, the adequacy of provisions and reserves and the disclosure of credit risk.

A sustainable credit risk management culture is an essential aspect for enriching the asset quality. Diversified credit portfolio, financial inclusion and regulatory guidance are the main component of the culture. Banks are to practice economically friendly policies and strategies in its borrower selection, credit processing and all credit activities.

Credit sanctioning process involves delegation of power to various lower levels of the management line from the top to the managers of a small branch to strike a balance between adequate control and flexibility in credit operations and to ensure transparency and accountability at all levels. A sound credit granting process, applicable for all, involves different steps, such as selection of borrower, processing of credit proposal, credit appraisal, credit assessment, credit risk grading, credit approval, sanctioning, documentation of credit, disbursement of credit and credit monitoring.

Credit risk mitigation, an important tool of credit risk management, requires that credit losses from any given account, customer or portfolio are to be addressed using a range of measures, such as risk based pricing, credit tightening, reducing the amount of credit available to higher risk applicants, diversification, increasing the portfolio mix of borrowers, collateral, credit insurance and other guarantees. The reliance that can be placed on these mitigation is required to be carefully assessed keeping in view the legal aspect, enforceability, market valuation, and counter-party risk of the guarantor etc.

2.2 Asset Liability Risk Management

Asset Liability Risk Management is a process to manage the composition and pricing of the assets, liabilities and off balance sheet items and aims to control banks' exposures to market risks, with the objective of optimizing net income and net equity value within the overall risk preferences of the bank. It has evolved in response to the problems of banks in the course of dealing in a wide range of diversified assets, liabilities and contingent liabilities in times of volatile interest rates and more generally a continuously changing economic environment.

Asset Liability Risk Management programmes focus on interest rate risk, liquidity risk and foreign exchange risk – the most important risks affecting organizations' balance-sheets.

The Asset and Liability Management governance entails at first setting up of a committee which is the key unit of the risk management system. The committee ensures that the term and conditions set by the policy making body are abided by the stakeholders in line with the budget and risk management objectives.

Liquidity risk management focuses on the funding liquidity of the bank which is the ability to meet current and future cash flow obligations and collateral needs, both expected and unexpected. Banks endeavours to avoid a situation when the current and prospective risks threatens the organizations' ability to meet its obligation.

2.3 Capital Management Risk

Capital Management Risk involves formulating policy to maintain a strong capital base to support business growth, ensure compliance with all regulatory requirements and obtain good credit rating etc. the objective being provision of cushion to absorb unexpected shocks arising from credit, operational and market risks.

2.4 Foreign Exchange Risk Management

Foreign Exchange Risk or FX risk usually arises from dealing with foreign currencies and swaying of exchange rates of the currencies in international market. The frequency and direction of rate changes, the extent of the foreign currency exposure and the ability of counterparts to honour their obligations to the bank are significant factors in foreign exchange risk management. An effective and functional foreign exchange risk management mechanism requires:

a. framing and implementing befitting and matured foreign exchange risk management policies; and
b. developing and implementing appropriate and effective foreign exchange risk management and control procedures.

For better handling of foreign exchange risk issues banks should craft appoist policy on foreign exchange risk that includes a statement of principles and objectives governing the extent to which a bank is willing to assume foreign exchange risk; establishes explicit and prudent limits on a bank's exposure to foreign exchange risk; and clearly defines the levels of personnel who have the authority to trade in foreign exchange.

2.5 Internal Control and Compliance Risk Management

Internal controls are the policies and procedures developed and implemented alone, or in concert with other policies or procedures, to manage and control a particular risk or business activity, or combination of risks or business activities, to which the bank is exposed or in which it is engaged. It refers to the mechanism in place on a permanent basis to control the activities in an organization, both at a central and at a departmental levels.

2.6 Money Laundering Risk Management

Money Laundering Risk Management entails that banks treat the money laundering and terror financing issues as vital part of its core risk management activities. Banks are required to formulate its own guidelines for prevention of money laundering in line with Anti Money Laundering Law and guidelines of the central bank.

2.7 Environmental Risk Management

Environmental Risk Management entails thwarting actual or potential threat of adverse effects on living organisms and environment by effluents, emissions, wastes, resource depletion etc., arising out of an organization's activities. It is a facilitating element of credit risk arising from environmental issues. Banks are required to formulate environment risk management guidelines with the purpose of understanding and managing risks that arise from environmental concerns. It is required to introduce general and sector specific guidelines.

2.8 Information and Communication Technology Risk Management

Information and Communication Technology (ICT) Risk Management involves formulating policy and guidelines to reap the advantages and minimize the disadvantages of ICT technologies. The rapid development of Information and Communication Technologies have effectively facilitated reorganizing banks' business processes and streamlining the provision of products and services in the dynamic business environment. ICT provides competitive advantage that brings numerous benefits including fast business transactions, increasing automation of business processes, improved customer service and provision of timely effective decision support.

On the other hand, ICT applications have also brought organizations' risks relating to ICT such as malfunctioning of system, failure of network, lack of technological knowhow, virus attack, hacking, spoofing, unauthorized access etc. In order to control these risks successfully, ICT risk management policies and strategies have to be developed and implemented in line with the ICT guidelines of the country.

3. Concluding Remarks

The paper highlights some modern-day challenges in terms of risks attached to various banking activities and offers some mitigating measures in broad terms. It also dwells on some activity-related issues and remedial measures thereof. The role of internal audit of the internal audit systems of the organization to monitor and give signals regarding the measure of risks is very important.

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What will Bangladesh Bank Look Like in the Next Two Decades? – A Central Banker's Prediction

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Abstract This paper attempt tries to foresee the changes that will take place in banking practices in the next two decades and corresponding changing role of central bank in those changed environment. The focus of Bangladesh Bank is expected to change from price stability to financial stability and coordination among different regulators is likely to be more integrated. Bangladesh Bank may focus more on risk-based supervision and advanced rule-based policy formulation might be preferred over discretion based one. Capital account convertibility and increased connectedness with external economies might create new threats and exchange rate management challenges for Bangladesh Bank. Managed floating would be difficult to sustain and the use of REER and extended Taylor rule are likely to be more common in the coming decades. Uniform reporting standards will be practiced and informal economy is likely to go under the surveillance of Bangladesh Bank and other supervisors.

Keywords ELA, Financial Meltdown, REER, Macro Prudential Policy.
JEL Classification: E50, E52, E58.

1. Introduction

Future is always uncertain and it is an extremely difficult task to predict what will actually happen in the upcoming two decades in respect of central banking policy and activity. In this paper, some guesses about the nature of central banking are made based on recent and upcoming developments. Expected changes in banking practice and Bangladesh Bank's possible responses to those changes, relation among different supervisors, expected changes in Bangladesh Bank's policy formulation etc. are envisioned.

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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.

2. Continuous Banking Licenses

Though there is no strict *Stop and Go* bank licensing policy, in reality, however, Bangladesh Bank (BB) entertained application for private banking license at quite some intervals. In future Bangladesh Bank might feel it necessary to consider continuous banking license keeping the application window always open. Continuous licensing will contribute to keeping a competitive pressure on the existing banks. It can be mentioned that even with continuous licensing facilities, total number of banks operating in Bangladesh economy are expected to decline. In the upcoming decades, the capacity of Bangladesh economy to accommodate greater number of banks in the banking system will come into question. It is likely that market pressure and potential synergistic benefits will make sure that some banks will be merged and non-performing banks will be eliminated from the market.

3. Shift in Focus of Bangladesh Bank – From Price Stability to Financial Stability

History shows that the role of central banks generally shifts after the occurrence of severe crises. The recent events in global banking practices suggest that the role of Central Banks is expected to shift once again (Good hart, 2010). Two such recent events may be mentioned.

- The near collapse of financial system during the recent global financial crisis; and
- The European Debt Crisis and the present ominous trajectory of public debt existing in a number of advanced economies. (BIS Papers no. 55, 2010).

These crises suggest that maintaining financial stability is one of the most crucial tasks of central banks besides maintaining price stability. Following the global trend and taking the negative consequences of financial instability into account, the focus of the BB is expected to shift towards maintaining financial stability in the upcoming two decades.

4. Separation of Bank Supervision Function from Monetary Policy Function

The question of whether central banks should be involved in bank supervision is an old chestnut that central bankers and academics have debated for many years. A major argument for separating divorcing the monetary authority from the bank regulatory authority is that the combination of functions might lead to a conflict of interest. Sometimes this conflict is supposed to bring about a bias towards extra injections of high powered reserves into the banking system. In contrast, strong arguments also exist in favour of combination of monetary and bank supervisory authorities; it is believed that an integrated approach to monetary policy and bank supervision would provide most efficient set of procedures for diagnosing problems with banks and then prescribing the correct mix of solvency and liquidity measures required to resolve these problems. Since maintaining financial stability is expected to be important goal of Bangladesh Bank, it is likely that Bangladesh Bank will continue to perform both the functions in future as well. This approach will allow better coordination and information sharing and will ensure informed policy decisions.

5. Expected Relation Among Bangladesh Bank, Government and Other Supervisors

Ensuring financial stability requires cooperation among different supervisors. In mitigating systemic risk, financial regulatory policies have important roles to play but they alone will not suffice to address systemic risk. Other policies – especially monetary and fiscal policy – also have a role to play. Policy coordination is essential nationally among monetary, fiscal and macro and micro prudential policy formulators. There may be debate about who should be in charge of handling the integrated stability issues. However, it can be assumed that BB will more likely be in charge.

Bangladesh Bank is an operating entity and has at the same time an oversight responsibility for clearing, settlement and payment systems. This allows it to have access to direct market information which enables it to identify stability issues well ahead compared to other supervisors. As a result BB is expected to be the main supervisor of financial stability issues in the next two decades. It would take help from other supervisors and indemnification from government would be warranted in case of involvement of public money.

6. Expected Changes in the Supervisory Environment and Bangladesh Bank's Response

Changes that might occur in the future are unknown to all; however, there are a few probable developments which might turn out to be crucial for Bangladesh Bank. The crucial developments that are expected to take place are:

- Transmission from fiat money to virtual/electronic money;
- Full convertibility of both current and capital account;
- Exchange rate transmission from managed floating system to Real Effective Exchange Rate (REER);

- Use of extended Taylor Rule for interest rate forecasting with additional financial stability variables;
- Necessity of institutional cooperation and reforms;
- The issue of central bank independence;
- Convergence to globally uniform reporting standards;
- Introduction of Bank Resolution Regime and Emergency Liquidity Assistance (ELA);
- Shadow banking and informal economies under the surveillance of BB/other Supervisors;
- New challenges from environment issues; and
- Change in central bank policy stance from discretionary to advanced rule-based approach.

All these expected changes are discussed in more detail in the subsequent sections.

6.1 Transmission From Fiat Money to Virtual/Electronic Money

Virtual/electronic money has already announced its importance in setting financial transactions in Bangladesh. In future, it is expected that virtual/electronic money will be a very large portion of money in circulation. The transmission will ensure the following issues:

- It will be possible to identify and reflect contribution of informal economies in the national accounts and
- All economic transactions can be traced which will facilitate better and earlier identification of potential threats.

It is mentionable that virtual/electronic money will help addressing traditional note forgery and counterfeiting. But there will remain chances of IT based fraud and forgeries, and sophisticated techniques of money laundering.

6.2 Full Convertibility of Current and Capital Account

Bangladesh Bank has already made current account convertible; however, capital account still is not convertible. In the upcoming two decades, convertibility of capital account may materialize which will make the capital market more integrated and may encourage “Hot money” entering and exiting the market. Banks’ portfolio investment would be more diversified as investment in many developing countries will be possible. Convertibility of capital account might, of course, increase the frequency of crises such as the Asian Financial Crisis of the late 1990s. Bangladesh would be more exposed to global economy because it would be more connected with the other economies due to free flow of capital. Bangladesh

Bank is expected to work closely with Bangladesh Securities and Exchange Commission to formulate regulations to address emergence of systemic threats.

6.3 Exchange Rate Regime

In the next two decades, it is likely that managed floating will be difficult to sustain because the market factors will be stronger than the capacity of Bangladesh Bank to intervene. There is a possibility that real effective exchange rate (REER) measurement will be a popular and widely used system. As REER provides more meaningful insights about purchasing power of any currency, it is expected to be measured and quoted regularly. Uniform methodology for calculating REER is most likely to be evolved.

6.4 Extended Taylor Rule for Interest Rate Forecasting with Additional Financial Stability Variables

A simple rule like approach from central banks is preferable for effective communication and for setting expectations of the market participants. One such widely used rule is the Taylor rule where the nominal target policy rate is determined based on three factors:

- Economy's long-run real interest rate plus the target rate of inflation;
- The deviation of inflation from the central bank's target; and
- The departure of real GDP from some measure of potential GDP.

The rule implies that when inflation is above target, the target rate should be increased and when GDP is below "potential", the target rate should be reduced. This approach had widely been used by developed central bankers in setting expectations (Rzhevskyy, Papell and Prodan, 2014). In the next two decades, an additional variable related to financial stability (i.e., credit to GDP gap) could be added to the existing Taylor rule as.

> Target Policy Rate = f (long-run interest rate, target inflation rate, GDP growth rate, financial stability indicator variable such as credit to GDP gap)

This extended Taylor rule may then be used in setting expectations of the public. As financial stability will become much important policy goal in future, Bangladesh Bank may consider credit to GDP gap as a crucial component before setting policy rates. If the credit to GDP gap suggests more than desired credit growth taking place in the economy then BB might raise the target policy rate to reduce excess credit growth.

6.5 Institutional Reforms

As financial stability is a shared responsibility of the regulators, the role and responsibility of each regulator need to be specified. Bangladesh Bank is expected to coordinate the activities of agencies for achieving financial stability goals. Financial Stability Group or Committee is expected to appear for handling systemic issues for which BB may work as the Technical Secretariat. This Group or Committee will possibly be headed by Minister of Finance; other members would be deputies to the Minister of Finance, Governor of Bangladesh Bank, and heads of regulators of other financial intermediaries.

6.6 Independence of Bangladesh Bank

The debate on BB's independence is expected to continue in the next two decades as well. Bangladesh Bank might enjoy greater operational independence but the question of full autonomy might remain unresolved. According to Good Hart (2010) there is less possibility of totally independent central banks in the future because central bankers are not elected bodies. Accordingly, as Bangladesh Bank is not an elected body, it is likely that BB would be kept accountable to the public through some control mechanism.

6.7 Convergence to Globally Uniform Reporting Standards

Full convergence of financial reporting standards to a uniform set of standards is expected to take place in future. Some expected developments would be:

- Full convergence of US GAAP, IFRS and BFRS into uniform set of standards; and
- Uniform market disclosure practices for banks and financial institutions.

Uniform reporting standards will help BB to assess the cross border performance of the regulated institutions. Uniform standards will also help in understanding the business models of divergent institutions.

6.8 Bank Resolution Regime and ELA

The key to dealing with problems posed by systemic and non-systemic banks will be the setting up of effective recovery and resolution frameworks as recommended by the Financial Stability Board (FSB). Taking into account the lessons of the global financial crisis and the policy responses to the same by several countries, BB has prepared roadmaps for implementing "Contingency Planning and Bank Intervention/ Resolution Framework" and "Lender of Last Resort/ELA Framework."

There is a strong possibility that these frameworks will come into force within mid 2015. In designing LOLR/ELA policies, systemic impact and cost of providing liquidity support are taken into account. Besides, moral hazard problem and excessive risk taking by Global Systemically Important Banks (G-SIBs) and Domestic Systemically Important Banks (D-SIBs) need to be considered. These guidelines are expected to provide smooth exit routs for problem banks in the near future.

6.9 Informal Economies Under the Surveillance of Bangladesh Bank/ Supervisors

In future, the informal sector of the economy is expected to come under the surveillance of Bangladesh Bank and other supervisors. This might happen due to the following reasons:

- The shift from fiat money to virtual/electronic money will ensure that any kind of financial transaction is done via a bank account or any electronic account; and
- As most transactions from informal economies can be traced there will be less possibility of any surprise or undetected systemic threats arising from these sectors.

These developments will make sure that BB has more information than earlier in formulating any policy recommendation.

6.10 New Challenges from Environmental Issue

Environmental issues will likely be very crucial factor in the next two decades. The expected developments that may affect banking practices in Bangladesh are outlined below:

- Development of mechanism to value ecosystems in national accounts;
- There will be increasing demand for “green bonds”;
- Bangladesh Bank may make carbon reporting or the reporting of environmental damage mandatory for financial institutions;
- Technology may increase the popularity of weather insurance products; and
- There will be possibility of higher asset allocation from institutional investors in climate change-mitigating financial instruments.

The challenge for BB would be to develop policies that support environmental protection but do not slow down the growth potential of the economy. Through experience, BB is expected to balance these issues better and come up with better policies.

6.11 Bangladesh Bank's Future Policy Style: Rule Based or Discretionary?

Both rule-based and discretionary policy initiatives have been used by renowned central banks (Rzhevskyy, Papell and Prodan, 2014). To communicate effectively and to set market expectations, rule-based policies are likely to be preferred and widely used by Bangladesh Bank. The average market participants is not well informed about the subtle details now and with this type of participants rule-based policies generate better results. Though knowledge level will increase in the next two decades, it is still expected that rule-based models will dominate over discretion, especially for stability issues. However, the rules will be updated compared to current practice. Banks will accumulate experience about how to tackle financial stability issues over the years. Discretionary policies might be used selectively when the situation calls for.

7. Changing Role of Bangladesh Bank After the Crisis

Prior to the global financial crisis like most central banks, Bangladesh Bank, kept itself limited to a predominantly micro-prudential approach to regulation and supervision and focused mainly on the soundness of individual institutions. The financial crisis compelled central banks to adopt, along with robust monetary policy responses, exceptional measures and an unprecedented expansion in their balance sheets. Their joint, coordinated action stopped the dangerous spiral of financial meltdown and economic contraction in which the world economy found it at the end of 2008 and in the first few months of 2009.

One of the main lessons of the crisis is that price stability, without financial stability, does not guarantee macroeconomic stability. Based on the lessons learnt from financial crisis, BB has been moving away, to a certain extent, from the old monetary policy model. BB feels the need to develop a specific new area of economic policy, termed as "macroprudential policy" with a preventive focus and the explicit objective of ensuring the stability of the financial system as a whole. It could be expected that, in future, Bangladesh Bank will use two sets of policies – monetary and macroprudential policies – to ensure a broadly defined financial stability objective.

From a macro-prudential perspective in financial regulation, Bangladesh Bank is expected to strengthen capital and liquidity requirements. It is expected to implement the up to date Basel guidelines in the next two decades. It is noteworthy that Basel III contains, along with basic capital and liquidity requirements, a counter-cyclical capital buffer. BB is expected to implement these regulations in the very near future.

8. Expected Regulations on Future Banking Practices

Besides implementing latest Basel requirement, Bangladesh Bank is most likely to implement dynamic provisioning and risk-based supervision system in the next two decades. Dynamic provisioning may be useful in mitigating the build-up of risks and in providing capacity of loss absorption to the banks. The supervision of Bangladesh Bank will focus more on risk aspects and the supervision system might follow the following chronological steps:

- 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 greatest.
- 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.

By following these steps Bangladesh Bank is expected to optimize its scarce supervisory resources and implement effective supervision system in the next two decades.

9. Conclusion

The future of central banking is difficult to predict. The role of central banks changes as new crisis evolves. Indeed, every crisis give the central bankers and other policy makers a unique type of lesson based on which specific policy responses are taken some having commonalities and some with geographical differences. In this paper, some guesses about the nature of central banking in the next two decades have been made. However, there is no certainty that only these changes would take place within the next two decades. There might be the emergence of a new crisis which would warrant a paradigm shift in the practice of central banking. Whatever changes take place, the stakeholders of the financial system will have to get themselves prepared to adapt to those in the best interest of maintaining stability of the financial system as well as sustainable growth of the economy of Bangladesh.

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Relationship Between Net Working Capital and Earnings Per Share: A Study on Pharmaceutical Companies in Bangladesh

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Abstract A business concern attempts to maintain sufficient working capital to operate its daily business. Both excessive and inadequate working capital hamper the firm's profitability. The motive of this study is to investigate the relationship between Net Working Capital and Earnings per Share of the five listed pharmaceutical companies in Bangladesh. For this, data of fourteen years have been examined. There is a significant positive relationship between net working capital and earnings per share. Also negative and insignificant relationship between net working capital and earnings per share is found for two pharmaceuticals companies.

Keywords Net Working Capital (NWC), Earnings per Share (EPS).

1. Introduction

Every company has to make arrangements for adequate funds to meet the day-to-day expenditure apart from investment in Fixed Assets. The internal resources of a business organization often become insufficient to meet all of its needs. Also it is not always possible for the owners, promoters or the entrepreneurs to mobilize fund from their personal resources. Resources, therefore, need to be financed through borrowing, keeping in view the short, medium and/or long-term requirements of trade or industry for funds.

Working Capital (WC) is a financial metric which represents operating liquidity available to a business, organization or other entity. Along with fixed assets such as plant and equipment, Working Capital is considered

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as a part of operating capital. It is a common measure of a company's liquidity, efficiency, and overall health. Because it includes cash, inventory, accounts receivable, accounts payable, the portion of debt due within one year, and other short-term accounts. A company's Working Capital reflects the results of a host of company activities, including inventory management, debt management, revenue collection, and payments to suppliers. WC is a trading capital, not retained in the business in a particular form for longer than a year. The money invested in it changes form and substance during the normal course of business operations. It is the flow of ready funds necessary for day-to-day operation of business concern and depending on the industry.

There are two concepts of Working Capital: gross and net, and they are explained and discussed hereunder. First, gross Working Capital refers to the firm's investment in current assets. Current assets are the assets which can be converted into cash within an accounting year (known as operating cycle) and they include cash, short term securities, debtors (accounts receivable or book debts), bills receivable and stock (inventory). Second, Net Working Capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to mature for payment within an accounting year and include creditors (accounts payable), bills payable, and outstanding expenses.

NWC can be positive or negative. A positive NWC will arise when current assets exceed current liabilities while a negative NWC occurs when current liabilities are in excess of current assets. Positive WC explain that the company is in a sound condition to reimburse it's short-term debt whereas negative WC explain that the most liquid assets of the company are not sufficient to fulfill its current monetary commitments. The two concepts of Working Capital (i.e. gross and net) are not exclusive; rather they have equal significance from the management viewpoint.

This study focuses the relationship between Net Working Capital and Earnings per Share (EPS). EPS is the monetary value of earnings per each outstanding share of a company's common stock. It represents the portion of a company's earnings, net of taxes and preferred stock dividends that are allocated to each share of common stock. The figure can be calculated simply by dividing net income earned in a given reporting period by the total number of shares outstanding during the same term.

2. Objective of the Study

The study investigates the association between NWC and EPS of the pharmaceutical companies in Bangladesh. The main objective is to examine the relationship between NWC and EPS of the companies. In order to attain the main objective, the following specific objectives are set out.

- To explore the impact of NWC on EPS; and
- To measure the extent of dependent variable EPS as explained by independent variable NWC.

3. Survey of Related Literature

Working Capital is a common measure of a company's overall health. The management of Working Capital is an imperative issue from corporate perspective, that's why many researchers from different areas study it with different views and in different environments. Most of the pollsters have concluded that there are negative association between Working Capital Management and profit performance whereas some others have concluded the contrary. The ensuing lines demonstrate some of the research findings of the previously done work on this and the related topics.

Shin and Soenen (1998) tried to relate efficient management of Working Capital with enhanced profitability. In their article 'Efficiency of Working Capital Management and Corporate Profitability,' they analyzed whether the Cash Conversion Cycle had some potential impact on the profitability of a sample of firms listed on the US Stock Exchange during the period 1974-1994. They used the Net Trade Cycle variable in which number of days inventory, receivables, and payables were all divided by the sales figure and then multiplied by 365 and they found that a reasonable reduction in the Cash Conversion Cycle could lead to an increase in the firms' profitability.

Rehman and Anjum (2013) examined the association between Working Capital Management and profitability of 10 Pakistani cement companies listed at KSE with correlation and regression analysis. Their result proved that there is inverse and positive association between Working Capital Management and profitability in cement industry.

Kesseven Padachi (2006) investigated the relation between Working Capital Management and profitability for a sample of 58 small manufacturing firms, using panel data analysis for the period 1998-2003. The result of his investigation showed that high investment in inventories and receivables are associated with lower profitability.

Vishnani and Bhupesh (2007) found a negative relationship between the determinants of Working Capital Management (WCM) and profitability (for most of the companies in their sample) through a realistic analysis of Indian Consumer Electronics Industry during the period 1994-95 to 2004-05.

Ramachandran and Janakiraman (2009) showed a significant negative relationship of EBIT with Cash Conversion Cycle through the regression analysis.

Zariyawati et al. (2009) tried to investigate the relationship between corporate profitability and WCM of firms in six different economic sectors of the Malaysian industry. Their results also were indicative of a strong and significant negative association between the two variables of study.

Rehman and Nasr (2007) of COMSATS Institute of Information Technology, Islamabad took a sample of 94 Pakistani non-financial firms listed in Karachi Stock Exchange for a period of six years from 1999 to 2004. The results of their analyses established a very strong negative relationship between the determinants of Working Capital Management and that of profitability. In addition to that, they also found a significant negative relation between the liquidity and profitability of firms in their sample.

Mallik, et al. (2005) tried to show the relationship between WCM and profitability of Indian Pharmaceutical Industry. But they failed to establish any relationship between working capital management and profitability.

Mukhopadhyay (2004) indicated, in his article 'Working Capital Management in Heavy Engineering Firms: A case study,' that no significant role did current assets play in the profit maximization of the engineering firms.

Govind Rao and P. M. Rao (1999) studied the relationship of Working Capital Management and profitability in Indian Cement Industry and found a mix of positive and negative association between the Working Capital related variables and that of profitability. The same association in a fertilizer company, NFL, is also found by Narware (2004) in his article 'Working Capital and Profitability: An Empirical Analysis.'

Eljelly (2004) used a sample of Saudi Arabian companies to show the relationship between liquidity and profitability. He showed that there is a strong negative relationship between liquidity and profitability by using correlation and regression analysis.

In this article the prior studies are extended by examining the relationship between the NWC and EPS of the pharmaceutical companies in Bangladesh. For this financial data of a relatively larger period of five pharmaceuticals companies are used.

4. Methodology

The main focus of this study is to determine whether there is a relationship between NWC and EPS. To find out this relationship five pharmaceuticals companies— ACI, GSKL, Beximco, Square and Pharma-aid are randomly selected.

This study has been conducted on the basis of secondary data of the illustrated companies that belongs to pharmaceutical sector in Bangladesh. All data have been obtained from annual reports available in Dhaka Stock Exchange (DSE). Based on annual reports, the study has selected all needed data for the fourteen year period from 2000 to 2013. The data include yearly data on current assets, current liabilities, total assets, financial assets, total liabilities and Earnings per Share of the selected companies. To accomplish the objective of the study, annual reports of the selected companies are examined one by one and the data are compiled and necessary calculations have been made manually through MS Excel.

In addition to the annual reports, relevant journals, articles, published report and books have also been viewed to form the theoretical back-ground. In the study the software, Statistical Package for the Social Sciences (SPSS), is used to analyze the data.

In using SPSS, some analyses— Correlation, Analysis of Variance (ANOVA) are performed. Here correlation is used to measure the degree of relationship between two variables that are NWC and EPS. To test whether there is any difference between NWC and EPS, ANOVA is also used.

5. Data Analysis and Findings

5.1 Correlation Analysis

Correlation analysis is performed to test the strength and direction of the linear relationship between independent variable and dependent variable. In this study independent variable is NWC and dependent variable is EPS. The following table shows the Pearson Correlation for the independent variable (NWC) and dependent variable (EPS).

The correlation analysis of Table 1 shows positive significant relationship between NWC and EPS for three pharmaceuticals companies such as ACI, GSKL, Pharma-aid. This analysis also shows negative insignificant relationship between Net Working Capital and Earnings per Share for two pharmaceuticals companies such as Beximco and Square.

Table 1: Correlations Result Between NWC and EPS

		ACI		GSKL		PHARMAAID		BEXIMCO		SQUARE	
		NWC	EPS	NWC	EPS	NWC	EPS	NWC	EPS	NWC	EPS
NWC	Pearson Correlation	1	.579*	1	.899**	1	.932**	1	-.366	1	-.120
	Sig.		.030		.000		.007		.197		.683

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

In case of ACI, the correlation is .579 with p-value 0.030 at 5% significant level. This result reveals that there is positive significant relationship between Net Working Capital and Earnings per Share. In case of GSKL, the correlation is 0.899 with p-value 0.000 and in case of Pharmaaid, the correlation is .932 with p-value 0.007. Both are significant at 1% level. This result reveals that there is a strong positive significant relationship between Net Working Capital and Earnings per Share for both firms. On the other hand, in the case of Beximco, the correlation is -.366 with p-value .197 and in the case of Square, the correlation is -.120 with p-value .683. This result reveals that there is negative insignificant relationship between Net Working Capital and Earnings per Share for both firms.

5.2 Analysis of Variance (ANOVA)

ANOVA is a statistical method for making simultaneous comparisons between two or more means; a statistical method that yields values that can be tested to determine whether a significant relation exists between variables. ANOVA analysis is used to check the differences between variables.

Table 2: ANOVA Analysis

		Sum of Squares	df	Mean Square	F	Sig.
ACI	Regression	1272.350	1	1272.350	6.056	.030[a]
	Residual	2521.021	12	210.085		
	Total	3793.372	13			
GSKL	Regression	1934.214	1	1934.214	50.427	.000[a]
	Residual	460.281	12	38.357		
	Total	2394.495	13			
BEXIMCO	Regression	2.513	1	2.513	1.862	.197[a]
	Residual	16.195	12	1.350		
	Total	18.707	13			
SQUARE	Regression	746.085	1	746.085	.176	.683[a]
	Residual	51008.148	12	4250.679		
	Total	51754.233	13			
PHARMAAID	Regression	11.074	1	11.074	26.348	.007[a]
	Residual	1.681	12	.420		
	Total	12.755	13			

a. Predictors: (constant), NWC; b. Dependent variable: EPS

The preceding table shows that ACI, GSKL and Beximco – the three companies come out with significant relationship between NWC and EPS. On the other hand, the result of F-statistics for both Beximco and Square companies reveals that the model is not significant.

5.3 Summary Results

Here the model summary is presented below in terms of their explanatory power represented by R Square summary statistic.

Table 3: Model Summary Results

	R Square	Adjusted R Square
ACI	.335	.280
GSKL	.808	.792
PHARMAAID	.868	.835
BEXIMCO	.134	.062
SQUARE	.014	-.068

a. Predictors: (constant), NWC; b. Dependent variable: EPS

The models tested show high explanatory power for two companies GSKL and Pharmaaid. ACI exhibits much less explanatory power for its model. The remaining two companies Beximco and Square have poor relationships in the assumed model.

5.4 Linear Regression Analysis

Linear Regression Analysis is carried out to see the significance of various variables assumed as independent. The results are presented below.

Table 4: Linear Regression Analysis

		Coefficient	p-value
ACI	α	10.658	.068
	β	1.459	.030
GSKL	α	-14.776	.006
	β	3.985	.000
Pharmaaid	α	.864	.188
	β	1.165	.007
Beximco	α	4.931	.000
	β	-2.265	.197
Square	α	221.667	.000
	β	-8.594	.683

In the cases of Beximco and Square, negative relationships are found between EPS and NWC although it is insignificant for Beximco. In others – ACI, GSKL and Pharmaaid the relationships are positive and significant.

6. Conclusion

This research is conducted with the aim of determining the relationship between Net Working Capital and Earnings per Share of the pharmaceutical companies in Bangladesh. For this Statistical Package for the Social Sciences (SPSS) is used to find out the relationships for five selected pharmaceuticals companies.

It is found that there are positive significant relationship between NWC and EPS in three companies that is ACI, GSK and Pharmaaid and negative insignificant relationship for Beximco but significant for Square. So, it can be concluded that there is no uniform relationship between EPS and NWC in Bangladesh pharmaceutical industry.

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Issues and Challenges of Corporate Social Responsibility

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Abstract The objective of the paper is to bring out some issues relating to Corporate Social Responsibility of business concerns. The paper concentrates on the conceptual incongruity and un-workability of socially responsible activity in the corporate culture. Corporate codes of conduct are not friendly to socially responsible activities. Due to the overriding budding to profitability, corporations end up with activities other than socially cherished: image building of corporations, contact-building with customers and others not connected to benefits of workers or customers.

Keywords Corporate Social Responsibility, Philanthropy, Corporate Structure, Image Building, Society Friendly Investment.

1. Introduction

Corporate Social Responsibility (CSR) is a growing area of interest for academics, practitioners and entrepreneurs in terms of both theory and practice. It refers to integration of social, environmental and health concerns on the part of companies in their business strategies, operations, and interactions with stakeholders. The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time (Carroll, 1979). With all encompassing globalization and emergence of new technologies the concept of CSR has acquired inescapably a high degree of acceptance in a large number of sectors.

In corporate history, it goes back to social and environmental damage of the East India Company. The concept of CSR is not new. It is as old as that of trade and business of corporations. Between 80's and 90's,

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CSR was conceptually in domain of academics. CSR was coined first in 1953, when Bowen's had published his book, "Social Responsibility of the Businessmen." In 1992 the Business for Social Responsibility formed to formulate social responsible policies for business. The world renowned company SHELL first implemented CSR in 1998.

While some corporations have taken every opportunity to make profit regardless of the impacts on society benefiting from the slave trade, colonialism and war, there is equally a history of a small minority of companies taking a more philanthropic approach by considering the needs of employees or assisting the poor.

2. Overview of Literature

The literature provides a variety of views regarding CSR definition and underlying dimension (McWilliamset et al., 2006). Till now, there is no universally accepted definition, measurement scale, and a universal framework for the CSR concept, though some agreement exists on the potential positive impact (Branco and Rodrigues, 2006; McWilliams et al., 2006; Smith 2003). What is needed is that firms must build their corporate values to create an organizational culture that is receptive to change and can sustain a Corporate Social Responsibility strategy over the long-run (Maon et al., 2009). Corporate Social Responsibility is an uncertain and complex term of assorted meaning (Matten and Moon, 2005). Social responsibility is used interchangeably with terms such as corporate responsibility and corporate sustainability. Much of the literature on CSR to date has engaged in mitigating in economic/ philanthropic terms the various activities connected with CSR (Basu and Palazzo, 2008; Margolis and Walsh, 2003).

The CSR concept evolved despite usual uncertainty (Friedman, 1970). Throughout this period, most of the studies attempted to define unique features and rules of CSR (Manne and Wallich, 1972). Some of the theories (Ackerman, 1975; Preston and Post, 1975) centred on the relationship between companies and their social context: society interacts with business at large, lending it legitimacy and prestige.

Studies by Lewis (2003), Lichtentein et al. (2004), and Nielsen et al. (2009) suggested that social values, new business opportunities, reduced regulatory interventions, customer satisfaction, firms' reputation, and better stakeholder relationship are driving forces motivating business firms for implementation of CSR initiatives.

3. Concept of Insider CSR

The conceptual origin of CSR are related to two parallel developments. One, the efforts of policy makers and organizations to spread the idea of CSR practices at all levels of the firm, by means of encoursing newer initiatives, (Tencati et al., 2004; Zadek, 2002). The European Union regards it as “a concept whereby companies/business firms decide voluntarily to contribute to the betterment of the social world and uplifting of society and a cleaner environment.” The social responsibility affects employees and more generally all the stakeholders under one corporate umbrella. It implies that organizations should integrate economic, social, health and environmental concerns into their business strategies, their management tools and other activities. At the beginning the focus was on large companies characterized by a progressively new range of activities. The idea emanates from the notion that corporations can and should create a beneficial donation to society. Thus CSR is viewed as a carry out of organizing the social, environmental and economic impacts of the corporation, being responsive to ‘stakeholders’.

The essence of Corporate Social Responsibility can be even traced back to earlier writings of Adam Smith and Milton Friedman – father of economics and Nobel laureate in economics respectively. Market is a bargain place of demand and supply. According to Adam Smith (1776), there is an ‘Invisible Hand’ in the market that play role to make decision about what goods and services need to produce for the society. ‘Invisible Hand’ in the market transfers self interest into societal interest and society does satisfy their desires from business. Therefore corporations need to satisfy societal interests.

Milton Friedman wrote that “the social responsibility of business is to increase its profit (Friedman, 1970).” It was severely criticised yet some opined that profit maximization as the goal of business, did not imply that business is devoid of bringing good to community. “He (Friedman) did speak of social responsibility as requiring business to be concerned with promoting desirable social ends, such as providing employment, eliminating discriminations, avoiding pollution” (Kotle and Lee, 2005).

4. Arguments Against CSR

4.1 Conceptual Incongruity

The scope of a company’s responsibility is defined by the company i.e. the Board of Directors and not socially because a corporation is the property of its shareholders. Directors of corporations are obliged to perform only in the best benefit of the corporation’s owners. For the reason, according to Bakan (2004), corporations, create their structures which are pathological in their pursuit of profit thus concentrating wealth in the hands of their shareholders. Corporations can make a decision which favours the wider social good if the product is also the most profitable one. So, the wider social good can only contingent upon the profitability objective. This is a reversal of traditional moral priorities that puts the benefits of society above self benefit. The question is worth considering when tackling social or environmental problems does not support economic growth. In particular, corporations are prone to carry on with socially harmful but profitable activities.

4.2 Un-Workability of Philanthrophy

Codes of conduct of corporations play important part in the nature and scale of their activities. Business of corporations involves realization of costs of production from the customers and tend to pass on extra burdens like taxes, cost of philanthropic works on the customers. When CSR works are made part of corporations' activities, corporations tend to negate some such burden by curtailing or withholding some labour rights.

4.3 Fallible Investment

Social responsible investment is a type of investment that brings forth specific goods or services particularly needed by the society to add to its benefits or to counteract some undesirables. Only a small number of ethically responsive investors pro-actively seek out these types of investments. Generally the screened out projects, on the basis of ethical consideration, find way to industries which were earlier screened out.

4.4 Profiteering in the Guise of CSR

Corporate business is posited to generate profits for business and tangible or intangible benefits for society. But the ground level reality does not mostly see materialization of such twin objectives. Examples of these are corporate philanthropy activities. When corporations promote charity, they give away their shareholders' money. Corporate officials who are decision makers regarding CSR programme are apt to see prospective benefits to corporations out of such acts they tend to build their images in the society needed to expand business.

4.5 Public Relations Through CSR

Many regard CSR activities of corporations as means to develop public relationship. By engaging in activities, professed to be on ethical considerations, corporations attempt to make brand name and build up relationship with their clients, arguing that 'regulation can only defend against bad practice – it can never promote best practice' (Mallen Baker, 2001).

5. Concluding Remarks

Discharging social responsibility is a daunting task for corporations. Making social change is a more difficult responsibility. The paper argues that corporations are structured for profit making. Under this structure, it is difficult to accommodate Corporate Social Responsibility. The twin objectives are conflicting. However, social responsible activities performed by business concerns can be due to motivations other than philanthropy. It can range from pure profit motivation in an indirect way, image building, contact building with customers etc. Having said all these things, there are pro-corporate social responsible points. The limitation of the paper lies in that it has not dwelt on these. CSR does not play significant role in making social change. Under such conditions, corporations may donate to government and government can assure social responsibility if there is good governance.

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