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Review of International Accounting Information Systems

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ABSTRACT
This paper traces the benefits of international accounting information systems-their contribution to standardization and harmonization by purposing and tasking for business management. In this review, the goal is to describe and summarize how the accounting information system can help management decisions and influence the business environment in a global scale. The unified, standardized accounting information system will lead to new types of analysis and data, furthermore with the possible integration of new indicators from the business management practice of certain countries. The purpose of this study was the measuring the differences between the national rules and the international methods by countries, then the valuing and analyzing their effects on the business environments. The study showed that both businesses earnings and stock returns effect on the management turnover. The businesses with lower labour productivity compared to their industry peers have greater incentives to adopt international accounting system. However, the results on turnover are sensitive to this change in variable specification. So the increase in the sensitivity of turnover to accounting performance postadoption is primarily driven by heightened turnover sensitivity to accounting losses. The empirical results could be the author's suggestions for business management.

Key words: International information systems, accounting standards, harmonization, economic effects.

JEL Classification Code: M40, M41, M48

INTRODUCTION

In this review, the goal is to describe and summarize how the accounting information system can help management decisions and influence the business environment in a global scale. The unified, standardized accounting information system will lead to new types of analysis and data, furthermore with the possible integration of new indicators from the business management practice of certain countries. Historically, standardization of the international accounting information systems has tended to follow the integration of the markets served by the accounts. For example, the move to unified national accounting system in the US in the early 20th century followed the integration of the national economy. Similarly the present impetus for global

accounting standards follows the accelerating integration of the world economy.

Without the common accounting standards the crossborder portfolio and direct investment may be distorted, the cross-border monitoring of management by shareholders obstructed, and the cross-border contracting inhibited and the cost of these activities may be needlessly inflated by complex translation (Meeks and Swann, 2009).

In case such multinational companies like Daimler Chrysler owning more than 900 subsidiaries, operating on 5 continents in more than 60 counties, the published financial results according to international standards is 1.5 times of the one according to German accounting standards. If earning after taxation (EAT) – deducted actual tax burdens - according to US Generally Accepted Accounting Principles (GAAP) is taken as 100 percent, due to differences between national accounting standards, EAT would be 25% more in UK, 3% less in France, 23% less in Germany and 34% less in Japan (Barth et al., 2007).

The purpose of the use of international accounting information system is that a single set of standards ensures similar transactions are treated the same by companies around the world, resulting in globally comparable financial statements. However, using the accounting standards consistently by firms we will find that they are changeable, because they are depend on the varying economic, political, and cultural conditions in one state. Accounting standard-setters and regulators around the globe are planning to harmonize accounting standards with the goal of creating one set of high-quality accounting rules to be applied around the world (Whittington, 2008).

With increasing globalization of the marketplace, international investors need access to financial information based on harmonized accounting standards and procedures. Investors constantly face economic choices that require a comparison of financial information. Without harmonization in the underlying methodology of financial reports, real economic differences cannot be separated from alternative accounting standards and procedures. Harmonization is used as a reconciliation of different points of view, which is more practical than uniformity, which may impose one country's accounting point of view on all others. Organizations, private or public, need information to coordinate its various investments in different sectors of the economy. With the growth of international business transactions by private and public entities, the need to coordinate different investment decisions has increased. The first argument for the harmonization of accounting information systems is the existence of the multinational companies, who invest enormous efforts into the preparation of their financial reports in order to comply with the national standards. For these companies life would be much easier if the same rules would be applied to their subsidiaries all around the world. On the other hand this would be profitable for the investors as well as they could compare the enterprises' results without difficulties, which would spare both money and other resources for them. This would also lead to the reduction of the information diversity between managers and investors. The information diversity is a costly and can be blamed for the decrease of

the managers' bonus, the increase of the equity's cost and the inaccuracy of the economical and the financial forecasts.

LITERATURE REVIEW

Prior researches have raised substantial doubt regarding whether a global accounting information system would result in comparable accounting around the world. But differences in accounting practices across countries can result in similar economic transactions being recorded differently. International accounting literature provides evidence that accounting quality has economic consequences, such as costs of capital (Leuz and Verrecchia, 2000), efficiency of capital allocation (Bushman and Piotroski, 2006) and international capital mobility (Guenther and Young, 2002). Prior researches (e.g. Meeks and Meeks, 2002) have raised substantial doubt regarding whether a global accounting standard would result in comparable accounting around the world. But differences in accounting practices across countries can result in similar economic transactions being recorded differently. This lack comparability complicates cross-border financial analysis and investment.

One study (Epstein, 2009) compared characteristics of accounting amounts for companies that adopted International Financial Reporting Standards (IFRS) to a matched sample of companies that did not, and found that the former evidenced less earnings management, more timely loss recognition and more value relevance of accounting amount than the latter did. They found, that IFRS adopters had a higher frequency of large negative net income and generally exhibited higher accounting quality in the post-adoption period than they did in the pre-adoption period. The results suggested an improvement in accounting quality associated with using IFRS.

Another study (Barth et al., 2007) found that first time mandatory adopters experience statistically significant increases in market liquidity and value after IFRS reportting becomes mandatory. The effects were found to range in magnitude from 3 to 6% for market liquidity and from 2 to 4% for company by market capitalization to the value of its assets by their replacement value.

Daske et al. (2007) also found that the capital market benefits were present only in countries with strict enforcement and in countries where the institutional environment provides strong incentives for transparent filings. In the order IFRS adoption countries, market liquidity and value remained largely unchanged in the year of the mandate. In addition, the effects of mandatory adoption were stronger in countries that had larger differences between national GAAP and IFRS, or without a pre-existing convergence strategy toward IFRS reporting. The increased transparency promised by IFRS also could cause a similar increase in the efficiency of contracting between firms and lenders. In particular, timelier loss recognition in the financial statements triggers debt covenants violations more quickly after firms experience economic losses that decrease the value of outstanding debt (Ball and Shivakumar, 2005; Ball and Lakshmann, 2006).

Accounting theory argues that financial reporting reduces information asymmetry by disclosing relevant and timely information (Frankel and

Li, 2004). Because there is considerable variation in accounting quality and economic efficiency across countries, international accounting systems provide an interesting setting to examine the economic consequences of financial reporting. The European Unions (EU's) movement to IFRS may provide new insights as firms from different legal and accounting systems adopt a single accounting standard at the same time. Improvement in the information environment following change to IFRS is contingent on at least two factors, however. First, improvement is based upon the premise that change to IFRS constitutes change to a GAAP that induces higher quality financial reporting. For example, Ball et al. (2006a) find that firms adopting IFRS have less earnings management, more timely loss recognition and more value relevance of earnings, all of which they interpret as evidence of higher accounting quality. Second, the accounting system is a complementary component of the country's overall institutional system (Ball et al., 2006b) and is also determined by firms' incentives for financial reporting. La Porta et al. (1998) provide the first investigation of the legal system's effect on a country's financial system. They find that common law countries have better accounting systems and better protection of investors than code law countries. Other factors associated with financial reporting quality include the tax system (Daske and Gebhardt, 2006), ownership structure (Jermakovicz et al., 2007; Burgstahler et al., 2006), the political system (Leuz et al., 2006), capital's structure and capital market development (Ali et al., 2000). Therefore, controlling for these institutional and firm-level factors becomes an important task in the empirical research design. As a result of the interdependence between accounting standards and the country's institutional setting and firms' incentives, the economic consequences of changing accounting systems may vary across countries. Few papers have examined how these factors affect the economic consequences of changing accounting standards. For example, Pincus et al. (2007) find that accrual anomaly is more prevalent in common law countries. Maskus et al. (2005) found that accounting quality is associated with tax reporting incentives. Exploration of the interaction between these factors and the accounting information system can provide insights into differences in the economic consequences of changing accounting principles across countries.

To sum up, according to studies regarding the adoption of IFRS, the companies that adopted IFRS needed to spend less time with earnings management and recognized loss more timely. These companies also experienced an improvement in their accounting quality. The adoption of IFRS also raised market liquidity and the value of the company. But we also have to add that these positive effects can be experienced mostly in those countries where the institutional background is appropriate. To be sure, arriving at accounting standards that promote a more faithful representation of economic reality is extremely challenging. Indeed, as some have argued, the economics of a transaction are often in the eye of the beholder (Zeff, 2006).

No matter how similar the accounting standards in different countries are, there will be slight or even bigger differences in the way they are applied by companies due to the differences in the economical, political

and cultural environment. A good example for how cultural differences can affect accounting practices is that in the countries which are characterized with small power distance and Beke 027 weak uncertainty avoidance accounting measures are more likely to be used as an indicator of a manager's performance than as a measure of the effectiveness of policies and procedures prescribed for them. Various researches draw the conclusion that countries having different cultures have also different accounting rules and practices (Bradshaw et al., 2008).

METHODOLOGY

The purpose of this study was the measuring the differences between the national rules and the international methods by countries, then the valuing and analyzing their effects on the business decisions. In the KPMG-Analysis (2010) partners in large accountancy firms (Big Four) from more than 100 countries benchmarked the national accounting rules in their country against international accounting standards, focusing their attention on methods as of 31 December, 2008. This survey contains information on how local GAAP differs from International Accounting Standards (IAS) on incorporating recognition, measurement, and disclosure rules. For each country, the survey captures next types of differences from IAS:

(a) Absence of recognition and measurement rules that are present in IAS (e.g. many countries do not require international standards),
(b) Absence of disclosure rules that are present in IAS (e.g. common disclosures that are called for under IAS but not required under local GAAP),
(c) Inconsistencies between local GAAP and IAS that could lead to differences for many enterprises, and
(d) Other issues that could lead to differences between local GAAP and IAS for certain enterprises.

To analyze business adoption decision, the author require data on stock returns, accounting earnings, total assets, market capitalization, leverage, growth, foreign sales, and sales per employee. Financial and price data are from the Worldscope and SDC database. The sample comprises 100 IFRS adopting firms. For the IFRS adopting enterprises the adoption year is treated as event year 0. The analyze enterprises' adoption decision, the author required data on stock returns, accounting earnings, total assets, market capitalization, leverage, growth, foreign sales, and sales per employee one year prior to event year 0, and closely held shares for event year 0. Close_Held is measured in event year 0. Using the lagged year's measure results in more missing observations but does not affect the paper's inferences.

The author expands on the adoption decision models if the demand from internal performance evaluations is a factor in business decisions to adopt international accounting standards and relied on the recent GAAP 2006: A Survey of National Accounting Rules Benchmarked Against International Accounting Standards (Nobes, 2006) and he followed the next logistic regression model after the prior literature (Wu and Zhang, 2009):

$$\text{Prob [Adopt=1]} = \text{Logit } (a_0 + a_1 \text{ Close\_Held}_0 + a_2 \text{ Labor\_Prod}_{-1} + a_3 \text{ RET}_{-1} + a_4 \text{ ROA}_{-1} + a_5 \text{Size}_{-1} + a_6 \text{Lev}_{-1} + a_7 \text{ Growth}_{-1} + a_8 \text{ Foreign\_Sales}_{-1}) \qquad (1)$$

Table 1. Results of logistic analysis.

Effect*	Estimate	Standard error	Marginal (%)
Close_Held $_0$	-0.00445	0.0026**	-0.64
Labor_Prod $_{-1}$	0.00005	0.0003 **	1.08
RET $_{-1}$	-0.1134	0.1447	-0.30
ROA $_{-1}$	-0.5609	0.7148	-0.31
Size $_{-1}$	0.2659	0.0461***	4.21
Lev $_{-1}$	1.3004	0.4882***	1.12
Growth $_{-1}$	-0.2883	0.2021	-0.50
Foreign_Sales $_{-1}$	1.2005	0.2301***	3.06

,* Indicate that a coefficient is significantly different from zero at the 10, 5 and 1% levels, respectively (one-sided tests for coefficients with predictions and two-sided tests for those without a prediction). *Marginal effects measure the changes in the predicted probability from a one standard deviation increase from the mean for a continuous variable and form 0 to 1 for an indicator variable with the other variables measured at the mean.

Where,
Close_Held : Percentage of closely held shares at the end of event year (event year of 2008 for the management turnover and employee layoffs analyses)
Labor_Prod: Labour productivity (sales per employee) minus the median labour productivity
RET: Annual raw stock return
ROA: Return on assets, accounting earnings is defined as net income before extraordinary items.
Size: Natural logarithm of market capitalization
Lev: Leverage, defined as long-term debt divided by total assets
Growth: Sales growth, current year's sales change divided by prior year's sales
Foreign_Sales: Foreign sales divided by total sales.

The regression results are reported in Table 1. The table reports the logistic reports to model business decisions to adopt IFRS. In Table 1 the coefficients estimates, standard errors, and the marginal effects are reported in columns (1) to (3), respectively. The Close_Held**0** has a negative coefficient, -0.00445, and significant at the 0.05 level. The marginal effect suggests that a one standard deviation increase in the percentage of closely held shares decreases the adoption likelihood by 0.64%. This support our argument that the greater demand for more informative and conservative accounting earnings due to performance evaluations at more widely held businesses increases these business' incentives to adopt international accounting standards. The percentage of closely held shares can also vary with business' incentives to access the capital market as more closely held business may have lower

demand for external capital. This is the reason why the author controls for various factors related to business financing needs in the regression model. To the extent the controls are adequate, the author's finding on Close_Held are consistent with compensation contracting demands affecting business decisions to adopt international accounting standards. The coefficient on Labor_Prod-**1** is -0.00005 negative as expected and significant as the 0.05 level. The marginal effect indicates that a one standard deviation increase in labour productivity reduces the likelihood of adoption by 1.08%.

The author analyzed CEO turnover-to-performance sensitivities separately for the adopting standards samples with the next model:

$$\text{Prob}\,[\text{CEO\_Turnover}_{t} = 1] = \text{Logit}\,(a_0 + a_1\,\text{DROA}_{t-1} + a_2\,\text{DRET}_{t-1} + a_3\,\text{Post} + a_4\,\text{Post}^{*}\,\text{DROA}_{t} + a_5\,\text{Post}^{*}\text{DRET}_{t-1} + \sum b_j\,\text{Control variable}_j) \quad (2)$$

Where,

CEO_Turnover: 1 if there is a CEO turnover in event year t; 0 otherwise.

DROA: 1 if ROA of event year t-1 is negative, and 0 otherwise.

DRET: 1 if annual stock return of event year t-1 is less than 20% and 0 otherwise.

Post: 1 of a firm-year observation is post-event year 0, and for prevent year 0 observations (event year 0 itself is removed).

The dependent variable, CEO_Turnovert, is an indicator equal to 1 there is a CEO turnover in year t and 0 otherwise. *Post* is an indicator variable, equal to 1 it the firm-year is post-event year 0, and 0 otherwise (event year 0 itself is removed from the analysis). The author includes the explanatory variables from the earlier adoption decision regression (except for ROA and RET*)* to control for business incentives to adopt international accounting standards and their potential impact on CEO turnover. These variables are measured around year t*.* The results for model (2) are reported in Table 2. The insignificant coefficient on $\text{Post}^{*}\text{DRET}_{t-1}$ is inconsistent with an overall increase in the performance sensitivities of CEO turnover at the adopting firms that might result from concurrent organizational changes other than accounting changes. The next model (3) is an analysis of layoff-to-performance sensitivities:

$$\text{Prob}\,[\text{Layoff}_{t} = 1] = \text{Logit}\,(a_0 + a_1\text{DROA}_{t-1} + a_2\text{DRET}_{t-1} + a_3\,\text{Post} + a_4\text{Post}^{*}\text{DROA}_{t-1} + a_5\text{Post}^{*}\text{DRET}_{t-1} + \sum b_j\,\text{Control variable}_j) \quad (3)$$

The dependent variable, Layofft, is an indicator, equal to 1 if there is a reduction of a business employee headcount of more than 5% in year t, and 0 otherwise. The explanatory variables on the right-hand side are the same as those in model (2) on management turnover, except for the addition of several control variables. Since the change in employee headcount can reflect contemporaneous changes in a businesses overall scale of operations, the author includes sales growth (Growth*)*, change in foreign sales (_Foreign_Sales), and an indicator variable for fixed assets disposal (Fix_Disposal), for year t.

The results for model (3) are reported in Table 3. The adopting firms' employee layoffs are more response to accounting performance post-adoption. On the control variables, the author found that businesses with higher labour productivity, that are larger, with greater contemporaneous and lagged sales growth, and less frequent layoffs. On the other hand, businesses with higher leverage, with divestitures have more frequent employee layoffs.

Table 2. CEO Turnover-to-performance sensitivity analysis.

Effect	Estimate	Standard error
$DROA_{t-1}$	-0.2611	0.2469
$DRET_{t-1}$	0.0221	0.2449
$Post_t$	-0.0415	0.1456
$Post_t$ * $DROA_{t-1}$	0.8062***	0.3092
$Post_t$ *$DRET_{t-1}$	0.0810	0.1960
$Close\_Held_t$	0.0007	0.1965
$Labor\_Prod_{t-1}$	-0.0001	0.0002
$Size_{t-1}$	0.0857**	0.0406
Lev_{t-1}	-0.5109	0.0406
$Growth_{t-1}$	-0.2152	0.4063
$Foreign\_Sales_{t-1}$	-0.2949	0.2092

,*Indicate that a coefficient is significantly different from zero at the 10, 5 and 1% levels, respectively (one-sided tests for coefficients with predictions and two-sided tests for those without a prediction).

Table 3. Employee layoff-to-performance sensitivity analysis.

Effect	Estimate	Standard error
$DROA_{t-1}$	0.2805*	0.1838
$DRET_{t-1}$	0.2016**	0.1050
$Post_t$	0.0269	0.1162
$Post_t$ *$DROA_{t-1}$	0.5345**	0.2628
$Post_t$ *$DRET_{t-1}$	0.1968	0.1403
$Close\_Held_t$	0.0033*	0.1985
$Labor\_Prod_{t-1}$	-0.0006	0.0004
$Size_{t-1}$	-0.0177	0.0289
Lev_{t-1}	0.3978	0.3831
$Growth_{t-1}$	-0.1266	0.2115
$Foreign\_Sales_{t-1}$	-0.0563	0.1546
$\Delta Foreign\_Sales_t$	-0.2631	0.6219
$Growth_t$	-4.1791 ***	0.5093

*The estimation results, **,***Indicate that a coefficient is significantly different from zero at the 10, 5 and 1% levels, respectively (one-sided tests for coefficients with predictions and two-sided tests for those without a prediction).

EMPIRICAL RESULTS

The author expanded on the adoption decision models and tests using regression functions if the demand from internal management performance evaluations is a factor in businesses' decisions to adopt international accounting system. The marginal effect suggest that a one standard deviation increase in the percentage of closely held shares decreases the adoption likelihood by 1.25 or 5% of unconditional adaptation probability of 20% (100/500). This supports that the greater demand for more informative and conservative accounting earnings due to management performance evaluations at more widely held businesses increases these companies' incentives to adaptation international accounting system. This suggests that businesses with lower labour productivity compared to their industry peers have greater incentives to adopt international accounting system. The study showed that both businesses earnings and stock returns affect the management turnover. Controlling for the effects of macro-economic conditions and employee layoffs by including the market return in each country it was pointed that the coefficients on market returns had been insignificant in the various regressions. Analyzing the changes in labour productivity at the adopting businesses the tests did not show a significant decreasing in the productivity over the last 5 years. It could be that businesses' labour productivity is persistently low, not necessarily deteriorating continuously, in the several years leading up to the adaptation. Meanwhile, there is a significant increase in labour productivity over event years. The author measured earnings and stock performances with indicator variables of negative Return on Assets (ROA) and stock returns respectively. He replaced the indicators with continuous measures of ROA and stock returns. The inferences on employee layoffs are unaffected. However, the results on turnover are sensitive to this change in variable specification. This suggests that the increase in the sensitivity of turnover to accounting performance postadoption is primarily driven by heightened turnover sensitivity to accounting losses. The empirical results of measuring and analyzing in details their pros and cons effects on the business environment there could be the author's suggestions for business management.

CONCLUSION

The present impetus for global accounting information system follows the accelerating integration of the word economy. The application of international financial reporting standards will allow greater comparison of international financial results. More sources and reports will be available to a greater audience of analysts to follow trends in countries where previously due to different regulations and thus different reports these were less meaningful. The unified accounting information system will probably lead to new types of analysis and data, furthermore with the possible integration of new indicators from the practice of certain countries.

The accounting information system differences matter even to financial analysts who specialize in collecting, measuring and disseminating business information about the covered companies suggests that there are potential economic costs, associated with variation in national rules

across countries. Besides it is a very important task for managers and researchers to valuate and analyzed the effects of international accounting standards on the business environment, especially their contribution to harmonization and globalization. While a large body of this study is devoted to understanding the causes and consequences of the adoption of international accounting standards, researcher' attention has thus far focused almost exclusively on the informational benefits for the business environments, like evolution of business turnover, employees and the management performance.

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Responsibility Accounting: A Control Tool for Management

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ABSTRACT
Large organizations are segmented for the sake of effective managerial control. These segments are responsibility centres. The individual in charge of a segment has been assigned authority and responsibility to control his or her responsibility centre. But the extent of controllability depends on various technical and behavioral aspects. The objective of goal congruence and success of the organization as a whole depends on the proper coordination among various responsibility centres and the consideration of various behavioral aspects related to the problem. Lean enterprise concepts only can be applicable insuring proper communication and coordination between responsibility centres. Responsibility accounting is practiced somewhat satisfactorily at profitable enterprises in Bangladesh.

JEL Classification Code: M14, M41, M49

INTRODUCTION

In a small organization, decision making and management of the business are often done by a single individual or by a small group of people .Once the organization grows beyond a few people, decentralization becomes necessary, because decision making about everything becomes impossible for the manager. The process of delegating decision authority and responsibility in an organization is known as decentralization. Decentralized or separated manageable parts or segments are referred to as responsibility centres1. Four common types of responsibility centers are cost centres, revenue centres, profit centres and investment centres. In every responsibility centre, centre manager has assigned responsibility with the greatest amount of influence over the key elements to be managed. These elements include costs for cost centre (a segment that mainly generates costs, but no revenue), revenue for a revenue centre (a segment that only generates revenue with relatively little costs), a measure of profitability for profit centre (a segment that generates both revenue and costs), and return on investment (ROI) for an investment centre (a segment such as a division of a company where the manager controls the acquisition and utilization of assets, as well as revenue and costs).

The term responsibility accounting (RA) refers to the accounting process that reports how well managers of responsibility centres have fulfilled their responsibility. As an accounting process, responsibility accounting acts as an information system which personalizes control reports by accumulating and reporting cost and revenue information according to defined responsibility areas. RA generally does not introduce any new techniques to accounting practice. It is usually the most formal communication system within the overall management communication systems. It introduces a convenient means of defining and presenting a complete management concept of accounting. Under RA, organization of responsibilities, accounting for costs, and budgetary control of operations are integrated to serve management. The objective of this paper is to highlight the pertaining areas of RA in an organization, show how it operates, detect its loopholes, and suggest overcoming these. An attempt is also made to present in brief the responsibility accounting practices at industrial enterprises in Bangladesh. This paper can be used as a base of future empirical research. The present study is done on the basis of available published literature and personal interview with company executives.

Review of the related literature

Netten, E.W[2]. in his article, "Responsibility Accounting for Better Management", stated that techniques practiced under the name of responsibility accounting is synonymous with management accounting. Responsibility accounting provides the right information to the right people at the right time. However his straight-forward comment is that responsibility accounting can never be a substitute for good management. According to him responsibility accounting is simply a tool, and a tool is inert until it is used. He opined that some systems that are otherwise sound never get off the ground because the managers do not really understand them, not put them to good use. Unless the operating people enthusiastically support responsibility accounting and make it work, even the best-conceived system will fall.

Pick, J[3]. Made a study with a question mark in his title, "Is Responsibility Accounting Irresponsible?" Here the author explains the needs of reappraisal of the effectiveness of RA because of the built-in weakness that may prejudice and vitiate the apparent accounting conclusions. He finds that the theory of responsibility is tied to the conventional view of business organizations, and erroneously takes the existence of perfectly structured hierarchies for granted. According to him RA bears some obliterate problems. i) It is tied up with conventional views of business organizations, which takes the existence of perfectly structured hierarchies. The theory imputes responsibilities to managers as isolated individuals, whereas few employees can function apart from their peers and environment, and nobody should be held responsible for what he cannot do. The importance and responsibilities of the groups representing the informal organization within the firm are ignored. ii) RA fails oftentimes because of its shortcomings in the techniques of data collection, measurements and evaluations, and because of its propensity to include wrong decisions. iii) Both logic and fairness often are wanting. First-line supervisors are a striking example; they usually have

responsibility without commensurate authority. He comments that using RA without probing the hazards or admitting their unpredictability is not taking a risk but is sheer irresponsibility.

Mackey, James T. [4] in his article, "JIT jitters about responsibility accounting" shows that under the new technology, like JIT, management evaluation based solely upon function and controllability may no longer be a sufficient criterion for the establishment of responsibility accounting systems and their use as a basis for bonus plans. If interdependencies between departments are not explicitly considered, cost accounting based bonus plan could be more of a liability than an asset. To his view, joint evaluation motivates managers to cooperate their mutual benefit. Separate, independent valuation may have an opposite effect. Vested interests, antagonisms, and game playing may bias cost and revenue estimates when the accounting system cannot provide accurate, reliable measurements. These concepts are important when departments can significantly influence each other's efficiency.

Alou S. et el[5] , in their treatise, " Responsibility Accounting for Banks'', state that as an alternative to using the Federal Reserve Functional Analysis Programme, a bank can choose to develop an information system capable of generating responsibility accounting report with which to analyze the costs and income from various services. The primary advantage to a bank of developing its own system is that the information is designed to meet specific needs of that bank and it is, therefore, more relevant for decision making. However, they point at its costly aspect also. They argue that the development of information systems for banks must involve consideration of the marginal principles of economics. Determination of how much and which information to develop should be based on whether the benefits accruing from the information exceeds the costs of developing and processing the information.

Cox, C.T. et al[6] in a study entitled "Responsibility and Operational Control for Governmental Units." found that the management of public entities in an effective and efficient manner was rapidly becoming increasingly important in light of budget shortfalls and public demanded more and better services. The private sectors had long been faced with the need for efficient management of resources and, as a result, had developed a body of management accounting techniques clearly having applicability to management of resources whether it was in the public sector or private sector. They suggested that the top management in local governmental units should be made aware of the management accounting control techniques, which had long been proven beneficial in the private sector. They proposed that the Governmental Accounting Standard Board should give more explicit attention to the development of Generally Accepted Budgeting Standards as broad guidelines to provide stronger budgetary guidance to governmental units.

Ali, Md. Shahjahan[7] wrote an article entitled "Responsibility Accounting in the Context of Kushtia Sugar Mills Ltd." He stated that responsibility accounting system was introduced in the sugar mills in Bangladesh in 1974 and it was revised and improved in 1998. Responsibility performance is measured with responsibility budget. But the responsibility budgets in the sugar mills were prepared after the expiry

of the crushing season on the basis of actual production during his study period. On the basis of data supplied by Kushtia Sugar Mills, it was found that the performance of the cost centre was unfavorable and the performance of the power centre was favorable during the year 1997-98. He suggested that the head office should be more careful for approving budget before the crushing season being started. So the persons who were in charge of the different cost centres could be able to implement the budget and they should be accountable for higher variance and the reasonable causes should be considered for higher variances.

The above literature survey brings out the facts that RA is an effective system of combining authority, responsibility, and accountability. But it possesses some shortcomings in the techniques of data collection, measurements and evaluations. The success of the system depends on enthusiastic participation of individuals to their respective responsibilities. Vested interests, antagonisms etc. are hindrances against proper cost allocations, and revenue determination. Proper, timely and relevant information is necessary for an effective RA system. Interdependencies between segments are also an influential factor of RA.RA can be applied in banks, Governmental units and other service departments. It is also quotable that determination of how much and which information to develop should be based on whether the benefits accruing from the information exceed the cost of developing and processing of the information.

Organization of Responsibilities

The responsibility accounting information system starts with an organization chart in which the spheres of jurisdiction have been determined. Authority leads to the responsibility for certain costs which, with the knowledge and cooperation of the supervisors, department head, or manager, are presented in the budget.[8]

A functional or divisionalized organizational structure facilitates well defined responsibility centres and proper delegation of authority. The managers of functional organizational structure do not have profit responsibility, as for example production manager has no control over sources of supply, selling prices or product mix and output decisions. It can be said that functional structures are cost centres or revenue centres. On the other hand divisional managers have profit responsibility. They are responsible for generating revenues, controlling costs and earning a satisfactory return on invested capital and also may have responsibility for making capital investment decisions. These are either profit centres or investment centres.[9] The goals or objectives of responsibility centres are set by budget. Achievement of these goals depends on effective managerial control, which ultimately relies upon the line of communication between the accounting department, the responsible supervisors, and their superiors.

Accounting for costs

A responsibility accounting system can be designed and implemented on a relevant basis regardless of the other features of accounting system like non-cost systems, mercantile system, standard cost system, direct

costing system etc. When the accounting system is established on a responsibility basis, the historical data become pertinent for planning and control purpose. Historical cost accounting has two main objectives with respect to costs: (1) to determine the cost of goods produced and (2) to provide relevant data for planning and controlling costs. Cost accounting emphasizes determining the cost of the products rather than cost planning and control. As a result emphasis is on account clarification based on product cost rather than on a responsibility basis. In responsibility accounting the emphasis is reversed. Here cost and revenue planning and control receive the primary emphasis. This concept does not say that product costing will be less accurate. It is a fact that costs initially accumulated for control purposes can be accurately recast for product costing purposes, but costs initially accumulated for product costing purposes cannot generally be recast effectively for planning and control purposes. In sum, effective profit planning and control requires that the traditional accounting emphasis be reversed - the accounting system must be primarily oriented toward the planning and control needs of management. Most companies initiating a profit planning and control program find it necessary to analyze carefully all aspects of the accounting system with a consequent reorganization of the system on a responsibility accounting basis.

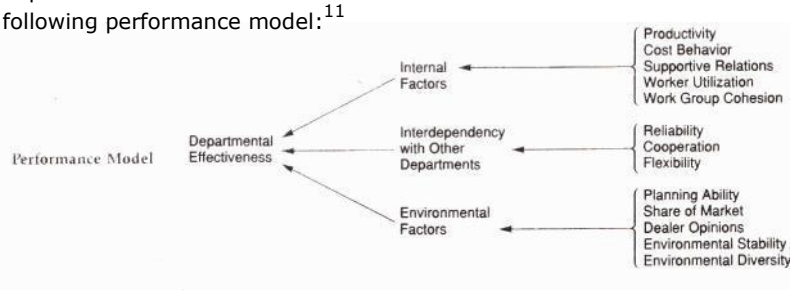
Budgetary control and responsibility accounting

A budget is a detailed plan outlining the acquisition and use of financial and other resources over some given period, expressed in quantitative term. Budget is one of the several control tools of management which charts a course of future action. In other word budget is the quantitative language of management's future plan. All levels of management should involve a budget programme and make it into a homogeneous unit. A workable, realistic budget will not only help promote coordination of people, clarification of policies, crystallization of plans, but will also create greater internal harmony and unanimity of purpose among managers and workers.[10] Responsibility accounting is essential to the budgetary control of operations. Budgetary control is a managerial control tool which can be materialized using RA successfully. Budgetary control and RA are supplementary to each other.

Besides budget, *authority*, *responsibility* and *accountability* are the key words in RA. *Authority* is the power to command others to perform or not to perform activities. It is the basis for responsibility which acts as the force to bind the organization together. *Responsibility*, or obligation, is closely related to the authority. It originates particularly in the superior subordinate relationship because the superior has the authority to require specific work from other people. As these people accept the obligation to perform the work, they create their own responsibility. The superior, however, is ultimately responsible for the subordinates' performance or non-performance. *Accountability* is another facet of responsibility in addition to the aspect of achieving results i.e., reporting results to higher authority. Reporting is important because it makes possible the measurement in terms of quantity, quality, time, and cost of the extent to which objective has been reached.

Controllability and Responsibility

The underlying principles of RA limit the individual's control effort to *controllable costs*. Controllable costs are those costs which are controllable by a specific responsibility centre. Whether or not a particular cost is controllable to a particular manager depends on the level of that manager in the hierarchy. In practice, controllability is difficult to pin point for at least two reasons. One is the problem of dual responsibility i.e., the responsibility for a particular item of expense may be shared, as for example excessive wastage may be due to careless handling of materials by production department or it may be due to the purchase of inferior quality materials by the purchase officer. The other is the time span, for example, present managers may have to work under undesirable contracts with suppliers or labor unions that were negotiated by their predecessors. Again some expenses cannot be identified with any specific responsibility centre. Such as sunk costs like depreciation, property taxes, insurance etc.; centralized service expenses like credit approval, billing collection of customer accounts, payroll activities etc., environmental and strategic expenses like major capital expenditure divisions, advertising divisions etc. Several factors may influence the extent of controllability and the effectiveness of the departmental control efforts. These factors are summarized in the following performance model:[11]



Feed- forward control and feed-back control

Lower-level managers exercise control of day-to-day operations. To control short term operations, lower level-managers should be provided with detailed comparisons of actual performance with budget performance at frequent intervals. Isolating inefficiency, if any, and causes for them, managers take preventive action against the repetition of the same. Two types of control action can be taken by the managers. *Feed back control* involves monitoring outputs achieved against desired outputs and taking whatever correcting action is necessary if a deviation exists. In *feed- forward control* instead of actual outputs being compared against desired outputs, predictions are made of what outputs are expected to be at some future time. If these expectations differ from what is desired, control actions are taken that will minimize these differences.[12] The objectives of feed-forward control is to achieve control before any deviations from desired outputs actually occur. In feed-forward control likely errors are anticipated and corrective actions are taken to avoid them. So a strong predictive model is required to ensure that control action will improve the situation and not cause it to

deteriorate further. When time lag between the occurrence of an error and the identification and implementation of corrective action is significant, feed-forward control can be preferable. In the short time lag feed forward control creates no significant problem. The budgeting process is a feed forward control system. A rolling budget can be prepared quarterly and be compared with annual budget in an organisation as a feed- forward control.[13]

Accounting based performance measurement

Performance measurement is an important phase in RA. There are accounting and non accounting measures of performance of a division or a responsibility centre. Non accounting measures evaluate competitiveness, product leadership, productivity, quality, delivery performance, innovation and flexibility in responding to changes demand. These are behavioral aspects of measurement. The issues of measuring financial performance in RA can be discussed under the following headings:

A. Performance measurement of Cost centres and Revenue centres:

Accumulated costs or revenues of responsibility centres – cost centre and revenue centre respectively- are compared with budgets and variances are analyzed. Cost centres are commonly evaluated using standard cost and flexible budget.

B. Performance measurement of Profit centres and Investment centres:

There is need for computing two measures of divisional profitability, one to evaluate managerial performance and the other to evaluate the economic performance of the division. The following approaches are generally followed for performance measurement of profit centres and investment centres (segments or divisions) to evaluate both managerial performance and economic performance:

1. Controllable contribution: In this approach controllability of costs are emphasized. Accounting is based on direct costing. Controllable contribution is determined as below—

Sales – variable cost = Variable contribution margin

Variable contribution margin – controllable fixed cost = Controllable contribution

Controllable contribution - non-controllable fixed costs = Divisional contribution

Controllable contribution is the most appropriate measure of a divisional manager's performance, since it measures the ability of managers to use the resources under their control effectively. Divisional contribution is useful for evaluating the economic contribution of the division.

2. Return on Investment (ROI): Managers generally use ROI to evaluate the performance of a division or subunit.

$$ROI = \frac{Income}{Investment}$$

Companies vary in the way they define both numerator (income) and the denominator (investment) of ROI calculation. Some organizations use operating income, the other use net income as numerator. Some organizations use total assets in the denominator, the other use total assets minus current liabilities. ROI can provide more insight into performance (using Du-Pont analysis) when it is divided into the following components:

$$\frac{Income}{Investment} = \frac{Revenue}{Investment} \times \frac{Income}{Revenues}$$

Or, ROI = Investment Turnover x Return on sales.

ROI highlights the benefits that managers can obtain by reducing their investment in current and long-term assets. Some managers are conscious of the need to boost revenues or to control costs but pay less attention to reducing their investment base. Reducing the investment base, means, decreasing idle cash, managing credit judiciously, determining proper inventory levels, and spending carefully on long-term assets. The objective of maximising ROI may induce managers of highly profitable subunits to reject projects that, from the view point of the organisation as a whole, should be accepted.

3. Residual Income (RI): RI is an accounting measure of income minus a required Taka return on an accounting measure of investment.

Residual income (RI) =Income – (Required rate of return x Investment)

Definition of income and investment used in RI is just like as in the case of ROI. The required rate of return *multiplied* by investment is also called the *imputed cost of the investment.* Imputed costs are costs recognized in particular situations that are not usually recognized by accrual accounting procedures. The use of imputed costs is an attempt to obtain more accurate accounting measures of economic impact. When investments are considered in performance measures, the imputed cost of the investment represents the opportunity cost or return forgone as a result of tying up cash in the investment rather than earning returns elsewhere on investments of similar risk.

Some companies favor the RI measure because managers will concentrate on maximizing an absolute amount (Taka of RI) rather than a percentage (return on investment). The objective of maximizing RI means that as long as a subunit earns a rate in excess of the require return for investments, that subunit should expand.

4. *Economic Value Added (EVA):*[16] EVA is a specific type of RI calculation. EVA equals after tax operating income minus the (after-tax) weighted- average cost of capital multiplied by total assets minus current liabilities.

Economic value added (EVA) = After tax operating income – {Weighted average cost of capital x (Total assets- current liabilities) }

When calculating EVA, companies make several adjustments to the operating income and asset numbers reported under generally accepted accounting principles (GAAP). For example, when calculating EVA, costs such as R&D, restructuring costs and leases that have long-run benefits are recorded as assets (which are then amortized), rather than as current operating costs. The goal of these adjustments is to obtain a better representation of the economic assets, particularly intangible assets, used to earn income. Naturally, the specific adjustments applicable to a company will depend on its individual circumstances.

5. *Return on Sales (ROS***):** The income - to - revenues (sales) ratio, often called *return on sales* (ROS), is a frequently used financial performance measure. ROS is the component of ROI in the DuPont method of profitability analysis.
In markets where revenue growth is limited and investment levels are fixed, ROS is the most meaningful indicator of a subunit's performance. ROI indicates which investment yields the highest return. RI and EVA measures overcome some of the goal-congruence problems that ROI measures might introduce. Some managers prefer EVA to RI, because EVA explicitly considers tax effects while pre-tax RI measures do not. Some managers favour RI for its relatively easy calculation than EVA. Wallace, J. S. found that relative to companies that did not adopt EVA, a sample of companies adopting EVA as a performance measure "i) increased their dispositions of assets and decreased their new investment, ii) increased
their payouts to share holders through share repurchases, and iii) used their assets more intensively. These actions are consistent with the strong rate of return discipline associated with the capital charge in residual income-based measures."[17]
Transfer price complication in performance measurement: Goods and services are often exchanged between various departments and divisions of a company. The measurement of profit in a profit centre is also complicated by the problem of transfer prices. A *transfer price* is the price charged by one segment of an organization for a product or services that it supplies to another segment of the same organization. A question arises as to how the transfer of goods and services between divisions should be priced. The transfer prices can have impact on the evaluation of each division's performance and measures applied for such measurement of performance. Basically there are two methods of transfer pricing- cost based and market based. Based on these, there are many types of transfer pricing- cost price, marginal cost price, standard cost price, cost plus fixed margin, market price, negotiated price, opportunity cost price etc. Suitable transfer prices should be

related to management performance assessment and decision optimization. The most dangerous drawback included in transfer pricing is that it may encourage managers to take actions not in the best interest of the firm.

Behavioral aspects of accounting control systems

Budgetary control and standard costing systems are concerned with influencing individuals within an organization to alter their behavior so that the overall aims of the organization are effectively attained. Argyris[18], Hofstede19, Likert and Seashore[20], Ridgeway[21] and many others are concerned with the behavioral aspects of accounting control systems. Behavioral scientists have argued that accountants are far more concerned with the technical excellence and sophistication of their systems than with their implications for human behavior. A lot of evidence has been presented in the behavioral literature on the dysfunctional effects of accounting control systems. Argyris in his study on human problems of producing budgets identified three human relations problems which are as follows:[22]

i) *Formation of anti management group:* Budget pressure tends to unite the employees against management and tends to place the factory supervisor under tension which ultimately leads to inefficiency and aggression, and perhaps to a complete breakdown of the supervisor. Constant pressure from top management for greater production may lead workers to join groups and also lead to the development of new cohesive anti- management groups.

ii) Feelings of failure: The finance staff may feel that success can only be achieved by finding fault with factory people. This has a number of adverse effects, such as making the supervisor feel deficient, causing him or her to lose confidence and interest in work, and to expect failure in the future.

iii) Blame on budget: Supervisors frequently use budgets as a way of expressing their own patterns of leadership. If this leads to people getting hurt, the budget will often get the blame. Though budget is neutral.

Responsibility Reporting

Responsibility reporting includes the reporting phase of RA. RA is a programme encompassing all operating management for which the accounting, cost, or budget divisions provide technical assistance. In the form of daily, weekly or monthly control reports reporting to the various levels of management can be divided into (i) responsibility performance reporting and (ii) information reporting. *Responsibility performance reports* are accountability reports with the purposes to inform managers and superiors of their performance in responsible areas and to motivate managers and superiors to generate the direct action necessary to improve performance. *Information reports* are issued for the purpose of providing managers with information relevant to their areas of interest, not necessarily associated directly with their specific responsibility for performance but on the progress and growth of the business.

To communicate effectively information may be written or oral. Quantitative information can be presented using tabular form, charts

and graphs. Narrative comments are also useful for conveying qualitative information and for analyzing and interpreting quantitative data. A performance report should be supplemented with data on non-financial variables.[14] Oral presentations are effective in offering opportunities to convey information, raise questions, and voice opinions.[15] Reports are not to blame anyone but to communicate timely relevant information showing departmental efficiencies or inefficiencies. Reports flow vertically according to the organization chart.

Evaluation of Responsibility accounting

RA, a part of traditional control systems, provides an organization with a number of advantages. RA with four responsibility centres provides a way to manage an organization that would otherwise be unmanageable. Assigning responsibility to lower level managers' higher level managers can concentrate their activities in more important areas, like long term planning and policy making .In RA system lower level managers and workers can be motivated because the system emphasizes their individual performances. It is generally said that RA helps to achieve goal congruence through motivation of the managers. Nevertheless, no single responsibility accounting is appropriate for all firms and for the same firm over life time. Cost allocation is a troublesome aspect in RA. Transfer prices and selling prices for artificial profit centres also create problems. Moreover pervasive behavioral considerations in RA lead the system to face a lot of controversy. RA system shows that information flows vertically rather than horizontally. Individuals in various segments and functional areas are separated and tend to ignore the inter independencies within the organization. Segment managers and individual workers within segments tend to compete to optimize their own performance rather than working together to optimize the performance of the organization. The situation prevents team work and creates the needs for buffers such as additional inventory, workers, managers and capacity. The situation is inconsistent with lean enterprise concepts of Just-in-time and the theory of constraints. However, these problems can be minimized as the researchers suggested through developing process oriented learning support systems, not financial results, fear oriented control systems.

RA in the perspective of Bangladesh

An attempt is made by the author to have a snap shot of RA in the perspective of Bangladesh. Two account executives of two different industrial organizations were interviewed. One is of a public company, The Square Pharmaceuticals Limited and the other is of Ashuganj Fertilizer and Chemical Company Ltd., an enterprise of the Bangladesh Chemical Industries Corporation (BCIC). The two companies are running at a profit. The Square Pharmaceuticals Ltd. has defined structured line of authority. They use computer technology in timely accounting and reporting systems. Proper responsibility is practiced in the organization. Ashuganj Fertilizer and Chemical Company Ltd. also practices RA in proper way, but the accounting and reporting systems are almost manual. Variances are analyzed at required intervals and corrective measures are also being taken, but whenever any decision conflicts with

the interest of CBA (Collective Bargaining Agent) members, it falls under their pressure and becomes difficult to be executed. While taking punitive measure against any individual, the administration usually faces the problems of nepotism, favoritism and political interference. Generally, it can be said that the RA as practiced in the abovementioned two companies are somewhat satisfactory. However, the scenarios of only two companies are not sufficient to conclude about the quality of RA in all other companies in Bangladesh. Further research is needed in this area.

Conclusions

RA is nothing but to control the operations of an organization on a segmental basis, where authorized managers are held responsible for any variance actually occurred from target. Accounting information itself bears subjectivity in its process. In RA, the scope of controllability and proper allocation of costs in the responsibility centres and the process of performance evaluation add new blight area. Managers should have proper training for efficient utilization of budgets. Organizations are led by financial as well as human resources. So, human behavior is an important aspect in RA. In this situation RA problems can be divided into two streams, one is technical and the other is behavioral. Environmental factors like market price, share of market, labor supply planning ability, environmental stability and environmental diversity also affect the effectiveness of a segment. It can be said that multidimensional factors impact the success of RA. Simultaneous application of behavioral science with proper accounting can lead RA to act as a successful managerial tool. Basically decision making function of accounting is a behavioral function. There is no way to ignore the behavioral sciences viz. psychology, social psychology and sociology. Managers should have proper training in these fields. Responsibility accounting is practiced somewhat satisfactorily at profitable enterprises in Bangladesh.

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Translog Cost Function: An application for Bangladesh Agriculture

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ABSTRACT
This study is concerned with factor substitution in Bangladesh agriculture. The translog cost function is used to study both substitutability and complementarity relationships between inputs. Using homothetic structure, the Allen partial elasticities of substitution (AES) is estimated to examine the nature of factor substitution among the four inputs of land, labor, fertilizer, and irrigation. The responsiveness of input demand to input prices is explored by estimating own price and cross price elasticities of demand. The empirical estimates indicate the existence of both substitutability and complementarity among inputs. A very high degree of substitutability between fertilizer and irrigation was found during the study period.

Key Words: Translog cost function, Homothetic structure, Factor substitution, Bangladesh agriculture.

JEL Classification Code: Q01, R10, D24, N55

1. Introduction

In the empirical study of factor substitution, the production function approach is widely used. The production function approach is of two types, one is *a priori* fixed and other is the flexible form. Among the *a priori* fixed group, Harrod-Domar, Leontief, Cobb-Douglas(CD) and the Constant Elasticity of Substitution (CES) are dominant. *A priori* fixed production functions are highly restrictive while the flexible forms are not bounded by any *a priori* restrictions. These functional forms are considered as the extension of the *a priori* fixed forms.

In the family of Production functions, the values of the elasticity of substitution are zero in the Leontief function. For Cobb-Douglas production function it is unity. A later development constitutes the CES function (Arrow *et al*., 1961) and the basic property of the CES production function is to allow the value of elasticity of substitution to assume any value between zero to (plus) infinity. A large number of studies were conducted by using the CES production function. Hence, the CES production function can be used to derive the values of elasticity of substitution other than unity.The CES function has, however, two important limitations. First, the CES production function is

unable to examine complementarity relationship among the pairs of inputs. But complementarity relationship appears quite frequently in agricultural production. Second, it is highly restrictive and it cannot deal with more than two inputs, implying that it is unable to analyze multi-input relationship. In contrast, the flexible forms can consider a large number of inputs and allow any value of elasticity of substitution between two inputs. Thus the flexible forms are able to analyze both the substitutability and complementarity relationships between inputs.

Development of flexible forms started during the 1970s. There are various types of flexible functional forms such as the generalized Leontief, the generalized Cobb-Douglas and the translog cost function. The transcendental logarithmic (translog) function was advanced by Christensen, Jorgenson and Lau (1971). Around approximately the same time, the generalied Leontief (Diewert, 1971) and the generalized Cobb-Douglas (Diewert, 1973) functions were proposed. In 1974, Lau (1974) suggested another type of flexible form – the Quadratic function. Four years later, McFadden (1978) introduced the generalized Concave function. These flexible forms can indicate a second order local approximation to any twice-differentiable production and cost function. In 1981, Gallant (1981) advanced the Fourier flexible form for estimating demand elasticities. This method is also able to globally approximate the price and income elasticities. Pollack, Sickles and Wales (1984) proposed a new production function, called the CES-translog. It is also a flexible functional form indicating a combination of the CES and the translog cost function. Thirtle (1985) suggested the functional form named the two-stage CES. In 1991, another form of transcendental production function – the Variable Elasticity of Substitution or VES production function-- was proposed by Bairam (1991).

A large number of studies have been done on the agriculture sector and most of these studies were based on the translog function where substitution possibilities between inputs was made. Following Binswanger (1973), Brown (1978), and Chotigeat (1978) and several other studies were done by Islam (1982), Boyle (1982), Akridge and Hertel (1986), Kuroda (1987), and Ali(1991), all of which applied the translog function in the agriculture sector.

OBJECTIVES OF THE STUDY

The core objectives of the present study are as follows: (a) to analyse the nature of factor substitution in Bangladesh agriculture sector and to examine the substitutability and complementarity relationship between different factors using the concept of Allen partial elasticities of substitution and (b) to investigate the responsiveness of input demand to input prices by estimating own price and cross price elasticities of demand.

THE BASIC TRANSLOG COST FUNCTION

The translog function introduced by Christensen, Jorgenson and Lau (1973) is used in this study. Like other Flexible forms, the translog function does not impose any *a priori* restriction on the values of elasticity of substitution.

In the usual form, the translog cost function can be written as

$$\ln C = a_0 + a_Y \ln Y + \frac{1}{2}\gamma_{YY}(\ln Y)^2 + \sum_i a_i \ln P_i$$

$$+ \frac{1}{2}\sum_i \sum_j \gamma_{ij} \ln P_i \ln P_j + \sum b_{Yi} \ln Y \ln P_i \qquad (1)$$

where C = total cost

Y = aggregate output

P = prices of inputs.

The possibilities of augmented technical change have not been included in equation (1). Incorporating the technical change by including time (t), equation (2) can be modified as

$$\ln C = a_0 + a_Y \ln Y + \frac{1}{2}\gamma_{YY}(\ln Y)^2 + \sum_i a_i \ln P_i$$

$$+ \frac{1}{2}\sum_i \sum_j \gamma_{ij} \ln P_i \ln P_j + \sum b_{Yi} \ln Y \ln P_i$$

$$+ \varphi_t t + \frac{1}{2}\varphi_{tt} t^2 + \varphi_t Y^t 1n Y + \sum_i \varphi_t P_i t \ln P_i \qquad (2)$$

Equation (2) considers technical change at a constant rate and it can indicate existence and direction of technical change.

The Cost-Share Equations

According to Shephard (1953), the share of an input in total cost can be viewed as its share in the total product. This is called Shephard's Lemma. Following the Shephard's Lemma, the cost-minimizing share equations for the various inputs can be obtained by logarithmically differentiating equation (2) with respect to input prices. Now the derived demand equations and the cost-share equations can be presented as

$$\frac{\delta \ln C}{\delta \ln P_i} = S_i = a_i + \sum_j^n \gamma_{ij} \ln P_j + b_{Yi} \ln Y + \varphi_t P_i t \qquad (3)$$

where S_i = Share of the i-th input in total cost.

In this study, the cost-share equations are used for estimation but the cost function is not directly used for estimation. The cost-share equations are estimated with the following restrictions imposed:

(1) Adding up criteria implying that sum of the cost-shares must equal unity. Symbolically,

$$\sum_i a_i = 1$$

$$\sum_i \gamma_{ij} = 0$$

$$\sum_i b_{Yi} = 0$$

$$\sum_i \varphi_t P_i = 0 \qquad (4)$$

(2) Zero degree homogeneity in prices implying that proportional changes in all input prices leave the factor shares unaltered. Symbolically,

$$\sum_j \gamma_{ij} = 0 \qquad (5)$$

(3) Symmetry implying that typical properties of neoclassical production theory are satisfied:

$$\gamma_{ij} = \gamma_{ji} \qquad (6)$$

Considering the above-stated restrictions which are placed on equation (3), different production structures can be reflected. In this study, the homothetic structure without technical change is empirically estimated.

Elasticities of Substitution and Demand

In the cost shares equations, the estimated gamma coefficients do not have any clear economic meaning but these form the basis for deriving the estimate of elasticities of substitution and demand. Both in the Allen partial elasticity of substitution (AES) and in the price elasticities of factor demand, the translated forms of gamma coefficients are included. Uzawa (1962) has demonstrated that the AES between two inputs i and j can be expressed as

$$\sigma_{ij} = \frac{C_i C_{ij}}{C_i C_j} \qquad (7)$$

where $C_i = \delta C/\delta P_i$

and $C_{ij} = \delta^2 C/\left(\delta P_i \, \delta P_j\right)$

where σ_{ij} denotes AES between inputs i and j. It is seen from the definition that the elasticities of substitution between any two inputs are symmetric. Equation (7) has been given in general terms. Now for the translog cost function, the AES is given by

$$\sigma_{ij} = \frac{\gamma_{ij} + S_i S_j}{S_i S_j} \qquad (8)$$

The own price elasticity is given by the following equation

$$\sigma_{ii} = \frac{\gamma_{ii} + S_i^2 - S_i}{S_i^2} \qquad (9)$$

where S_i and S_j are the shares of the i-th and j-th input.

From the estimated gamma coefficients, the price elasticities of input demand (ED) with respect to own and other prices can also be obtained. Allen (1938) states the relationship of elasticity of substitution and elasticity of input demand thus

$$ED_{ij} = S_j \sigma_{ij} \qquad i = j \qquad (10)$$

$$ED_{ii} = S_i \sigma_{ii} \qquad (11)$$

EDs denote the elasticities of input demand where it is assumed that the cross price elasticities are not equal, that is, the share of i-th input may not be equal to the share of the j-th input.

In this study, corresponding to the translog cost function, the particular cost-share equation of each input is estimated using an input classification consisting of land, labour, fertilizer, and irrigation. Other users of the translog specification, Stevenson (1980), Merrifield and Haynes (1984), Pollack *et al*. (1984) and Ali (1991) applied the FIML method as an estimation procedure for their studies. In this study, the Full Information Maximum Likelihood (FIML) method has been applied to estimate the cost share equations. Since the sum of cost shares equal to one, the problem may arise where the estimated variance-covariance matrix across equation is singular. To overcome this problem, one share equation has been deleted and an iterative method is used until it converges to an identity matrix to ensure that the estimates are invariant to the share equation deleted. Estimations have been done using the well-known econometric package SHAZAM

SELECTED FLEXIBLE FORM **STUDIES ON FACTOR SUBSTITUTION**

Christensen, Jorgenson and Lau (1973) advanced a new production function which permits a greater variety of substitution and transformation and based on the translog production frontier and price frontier, they studied the US private domestic economy for the period of 1929 to 1969. The data on prices and quantities of labour and capital as inputs were used. As in the study of capital-labour substitution, production possibility frontier characterised by additivity and homogeneity was considered useful.

Berndt and Wood (1975) applied the translog cost function in US manufacturing sector for the period 1947 to 1971. He studied factor substitution and demand for energy and used four inputs – capital, labour, energy, and material and obtained a substitution relationship between energy and labour and a relation of complementarities between energy and capital.

Braeutigam, Daughety and Turnquist (1982) estimated a flexible functional form (translog) for a single railroad firm. In this study, speed of a shipment was used as a stochastic output for a railroad. Substitution relationship was found between labour and equipment. In this study, fuel and labour was found more substitutable than labour and equipment.

Merrifield and Haynes (1984) applied the translog production function to study factor substitution in the Pacific-Northwest forest products industry. In this study, aggregated lumber and plywood has been considered as output. They used three inputs – labour, stumpage, and capital. To estimate the output demand, data were used for the period 1950-76. The authors found that substitution possibilities existed between labour and capital, and stumpage and capital.

Aw and Roberts (1985) used the translog unit cost function to estimate the import demand and substitution elasticities for US imports from

Newly Industrializing Countries (NICs). US imports from Asian and South American NICs appeared as complements for domestic labour while it was found to be substitutes for domestic capital.

Bairam (1991) first applied the Variable Elasticity of Substitution (VES) production function to the case of Bangladesh. Another form of transcendental production function, the VES is used to study capital-labour substitution. The empirical results implied that the overall elasticity of substitution between labour and capital might tend to decline due to any shift from the service sectors to light industry sectors.

Campbell (1993) estimated the translog cost functions for the USA manufacturing sector. The data for capital, labour, energy, materials, and business services were used in this study. Under the general error correction model, energy and capital were found to be substitutes while labour and energy were found to be complements which is rather unexpected. Therefore, it is seen that in all the studies, the authors have used translog cost function in various sector. The present study is an effort to employ translog cost function in case of Bangladesh agriculture sector towards this end.

THE DATA

It is necessary to separately construct the input cost shares and price indexes of four inputs (land, labour, fertilizer and irrigation) for estimating the coefficients of the cost share equations corresponding to the translog function. Time series data on price and quantities of inputs are used in this study. The data are mainly collected from the official statistical sources of Bangladesh such as the Bangladesh Bureau of Statistics (BBS). The data cover the period 1972-73 to 1994-95. Since this study uses annual data, total number of observations is 23.

In this study, the opportunity cost of land is assumed to be 5 percent. Such a rate was used by early researchers such as Binswanger (1973) and Islam (1982). To obtain the cost of land, the sum of opportunity cost of land and real estate taxes are included. The cost of land is estimated by multiplying the price of land by quantity of land. To obtain the cost of labour, persons employed in agriculture sector are multiplied by yearly wages.Three types of fertilizer – Urea, Triple Super Phosphate, and Muriate of Potash, which are used in the Bangladesh agricultural sector, are considered. Considering the prices of fertilizer by type, the costs of fertilizer are derived as the per year consumption of fertilizers multiplied by the corresponding year's prices (Taka per ton).In Bangladesh, three types of modern irrigation methods play a dominant role. These are low lift pumps (LLPs), deep tubewells (DTWs), and shallow tubewells (STWs). Due to non-availability of particular yearly data on prices of irrigation the growth rates are obtained from the available data and used to approximate values for the missing years. Thus to obtain the costs of irrigation, the area irrigated by various methods are multiplied by operating and maintenance cost paid by farmers for the respective methods.

For constructing the price and quantity indexes of inputs by using the yearly data, Divisia indexing method is employed in this study. Divisia

indexing method is considered appropriate for the translog function (Christensen, 1975; Diewert, 1976; Kuroda,1987;).

EMPIRICAL ESTIMATES OF FACTOR SUBSTITUTION IN BANGLADESH AGRICULTURE

The estimates of the derived demand functions of the translog model are presented in Table 1.

Table 1: Estimates of Derived Input Demand Functions, Homothetic Structure without Technical Change

Equation	Land	Labor	Fertilizer	Irrigation	Intercept	R^2	SEE	D-W
Land	2027** (16.76)	-.1864** (-22.79)	.0229** (3.23)	-.0391** (-3.34)	.2022 (73.02)	.9746	.006	1.02
Labor		2421** (20.09)	-.0084 (-1.18)	-.0472** (-4.35)	.7596 (250.30)	.9582	.009	.98
Fertilizer			-.0307** (-4.23)	.0163* (2.01)	.1916 (8.91)	.5000	.006	1.05
Irrigation				.0700	-.1534			

Note: The estimates were derived using the symmetry restrictions and the restriction that the sum of gamma coefficients is equal to zero for all i and j. In the irrigation equation, the estimated coefficient of irrigation were also derived by using the homogeneity restriction. Figures in parentheses indicate the asymptotic t-values. Coefficients significant at the 1% and 5% levels are denoted by two and one asterisk (s) respectively.

Eight of the nine estimated coefficients of input prices are statistically significant. The values of standard error of estimates (SEE) are found to be very low. The R^2 value of each equation ranges from 0.50 to 0.97. No R^2 value is given for the irrigation equation, since the irrigation equation is deleted from the estimation procedures. The Durbin-Watson statistics of each share equation falls within the indeterminate region. The estimated input price coefficients (the gamma coefficients) do not have any clear economic meaning, but these are used to calculate values of the Allen partial elasticities of substitution (AES) and own and cross price elasticities of demand (ED). The AES measures the ease with which one input is substituted for (or complemented by) another input in response to changes in their respective prices. The estimated input price coefficients are converted into Allen partial elasticities of substitution (AES). The estimates of AES are presented in Table 2.

Table 2: Estimates of Partial Elasticities of Substitution, Homothetic Structure without Technical Change

	Land	Labor	Fertilizer	Irrigation
Land	.1745	-.0343	5.6773	-7.6879
Labor		.0655	.5201	-2.8646
Fertilizer			-91.7916	41.8437
Irrigation				19.6875

Table 2 reveals that substitutability relationship prevailed for the pair of inputs land-fertilizer, labour-fertilizer and fertilizer-irrigation. Substitutability between land-fertilizer and labour-fertilizer can be viewed as sensible results. These results are compatible with the shift of agriculture labour force from the traditional agriculture sector to the non-agriculture sector, a slight increase in cultivated land and a remarkable increase in fertilizer consumption of the Bangladesh agriculture sector. The substitution relationship between fertilizer and irrigation is also viewed as a sensible and expected result.

The pair of inputs land-labour, land-irrigation and labour-irrigation displayed complementarity. The appearance of land-labour complementarity can be viewed as a common feature of Bangladesh agriculture because it is consistent with the observed decrease in the use of labour and a very moderate increase in cultivated land. The complementary relationship between land and irrigation is plausible because an increase in cultivated land may tend to bring more land under irrigation. But the complementary relationship between labour and irrigation is somewhat unexpected.

Estimates of own and cross price elasticities of demand (ED) show the responsiveness of any particular input to changes in its own prices or changes in other input prices and it is shown in Table 3.

Table 3: Estimates of Own and Cross Price Elasticities of Demand, Homothetic Structure without Technical Change

	Land	Labour	Fertilizer	Irrigation
Land	.0449	-.0240	.1419	-.1345
Labour	- .0088	.0458	.0130	-.0716
Fertilizer	1.4612	.3641	-2.2947	.7322
Irrigation	-1.9788	-2.005	1.0460	.3445

It is observed from Table 3 that the own price elasticity of fertilizer is highest followed by that of irrigation, labour and land. The own price elasticity of demand of land is the lowest. A theoretically inadmissible positive own price elasticity was found in three cases. Such results are not uncommon in empirical research and were encountered by some earlier researchers (Baanante and Sidhu, 1980; Islam, 1982). Since the own price elasticity of demand of fertilizer is highest followed by that of irrigation it seems that the demand for fertilizer and irrigation are more responsive to own price changes than those of labour and land. Among the positive cross-price elasticities, fertilizer-land displays the highest positive value which indicates that the demand for fertilizer is more responsive to change in the price of land than that to other input prices.

SUMMARY

The empirical estimates of the Allen elasticities of substitution (AES) showed both substitutability and complementarity relationships exist in Bangladesh agriculture. Land-fertilizer and fertilizer-irrigation input pairs displayed substitution relationship and complementary relationship of

land-irrigation and labour-irrigation are found in this study. Statistically, the translog model performed fairly well under a multi input production framework. .Most of the own price elasticities of demand for farm inputs were found to be less than one which indicated prevalence of inelastic demand for farm inputs.

This study is based on four inputs, that is, land, labour, fertilizer, and irrigation. If researchers want to employ more inputs like HYV (High Yielding Variety) seeds, pesticides, then it would be possible to make a wider comparison. The first twenty three years of Bangladesh agriculture which was studied and showed our agriculture move away from the traditional mode of production to the age of modern input use. This study provides an assessment of this period. Policy makers and future researchers may find this useful.

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Cost Structure and Profit Stability: A Comparative Study between CMC- Kamal Textile Mills Ltd. and Square Textile Ltd.

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ABSTRACT
Cost structure is an important concept to be aware of and to be understood by all the concern persons in any manufacturing or service providing organization conducting any economic activity and with an aim to improving quality of service as well as increasing productivity and profitability. In this study an attempt has been made to compare the cost structure and show the impact of cost structure on profit stability between CMC-Kamal textile mills ltd. and Square textile ltd. The study revels that CMC-Kamal textile mills ltd. enjoys wider movement in net income as changes take place in sales, with greater profit in business good years and greater losses in business bad year. On the other hand, Square textile mills ltd. enjoys somewhat greater stability in net income i.e. Square textile ltd. is less vulnerable to downturns than CMC-Kamal textile mills ltd., but it will do so at the risk of losing substantial profits if sales trend upwards in the long run. Researcher also found, due to consisting lower fixed cost, square textile ltd. has a lower break-even-point and higher margin of safety; therefore, it will reach to the profit as quickly as CMC-Kamal textile mills ltd. in the periods of sharply declining sales. The study also highlights the problems regarding cost structure and suggests how to overcome these problems.

JEL Classification Code: D61, P52, L67, M49

Introduction

Shortly, Expense means a sacrifice for consuming something and cost means a sacrifice for acquiring something. In accounting point of view, expense means any cost of doing business resulting from revenue generating income and cost means to money, time and resource associate with a purchase or activity. On behavioral aspect- how a cost will react or respond to the change in the level of activity, costs are two types fixed and variable. A cost fixed in nature that remains constant, in total, on the other hand a cost variable in nature that varies, in total, in direct proportion to change in the level of activity. Cost structure refers to the relative proportion of fixed and variable cost in an organization. This cost structure is closely related with profit which is a prima-facie objective of every business. Profit is also treated as a barometer of the success of a business concern. So the efficiency of a business concern is

measured by the amount of profit and profit stability which are largely depending on an appropriate cost structure. Alam (1989) evaluate the cost structure and profitability of an organization and recommended policy of efficient management to overcome the negative effect of low turnover of capital and cash balance.

Centre for Policy Dialogue (CPD) report No.18 express that "the cost structure of textiles or clothing may differ across countries because of differences in the composition of products and differences in factor prices".

Singhal, Arvind (2004) mentioned that "the textile value supply chain can optimize their costs by concentrate on operational excellence, collaborating with partner and innovation with a focus in the area of logistic and sourcing.

Deloitte (2003) observed that "using the supply chain cost structure to gain competitive advantages is at the bottom of the list for many companies. Logistic cost optimization, especially within the textile and apparel supply chain, should be seen as valuable to the manufacturing and retailers. This is because logistics costs increase the initial cost of finished goods".

The textile industry is one of the oldest in the world. The oldest known textiles, which date back to about 5000 B.C., are scraps of linen cloth found in Egyptian caves. The industry was primarily a family and domestic one unit the early part of the 1500s when the first factory system was established. It wasn't until the industrial revolution in England, in the 18th century, that power machines for spinning and weaving were invented. In Bangladesh, textile industries have become highly export oriented sector from 1980. According to Export Promotion Bureau of Bangladesh, at present the earning from textile industries increased tremendously, which is now over 12 billion USD that is 79% of the total export earnings of the country.

CMC-Kamal textile mills ltd. is located in Kaicha Bari, Bashbari, Savar, Dhaka- occupied with 20 bighas of freehold land. In 25th May, 1995 the company started its business with a product line of manufacturing cotton yarn of different counts. In 1998 Dhaka Stock Exchange (DSE) listed CMC- Kamal textile mills ltd. with Tk. 50.00 crore as authorized capital. Now its Paid-up capital is 17.20 crore. The company's initial designed capacity is 24,960 spindles + 5 open end spinning frames @ 192 spindles each.

Square textile ltd. is one of the most sophisticated vertically integrated sets-up textile mills in Bangladesh. It started its manufacturing facilities of cotton yarn combining modern technology with skilled manpower. Dhaka Stock Exchange (DSE) listed Square textile ltd. with Tk. 100.00 crore as authorized capital. Now its Paid-up capital is Tk. 70.58 crore.

Objective of the study

The main objective of the present study is to compare the existing cost structure and show the impact of cost structure on profit stability between CMC-Kamal textile mills ltd. and Square textile ltd. In order to achieve the main objective we have to study the following specific points.

1. To have an overall idea about textile sector highlighting the CMC-Kamal textile mills ltd. and Square textile ltd.
2. To identify the cost associate in per unit production of both companies
3. To measure the vulnerability/ profit stability in case of changes in unit volume
4. To identify the problems related with selecting a best cost structure
5. To suggest probable steps to be taken to solve the identified problems.

Methodology of the study

The study has been conducted based on mainly secondary data and information, these includes annual reports, audited statements of accounts, published books, journals, articles, research repots and web based information. The relevant secondary data has been collected through personal visit to the head office of CMC- Kamal textile mills ltd. and Square textile ltd by researcher for several times. In addition to these secondary data & information, some primary data relating to the cost structure like the portion of fixed and variable cost included in the operating costs, pricing and marketing system, problems and prospects of the textile etc have been collected through discussion with accounts officer of selected organizations. To analysis the findings simple statistical and accounting tools like percentage, contribution margin ratio formula, break-even point and margin of safety formula were used where appropriate.

Findings and analysis

Table-1: Contribution income statements of CMC- Kamal textile mills ltd. and Square textile ltd.

Particulars	CMC- Kamal textile mills ltd.				Square textile ltd.			
	In total (Tk.)	Percentage			In total	percentage		
Sales revenue	20,74,53,709	100%	---	---	507,56,26,120	100%	---	---
Less: Variable cost	15,58,13,464	75.11%	82.76%	---	430,88,15,484	84.89%	93.30%	---
Contribution margin	5,16,40,245	24.89%	---	---	76,68,10,636	15.11%	---	---
Less: Fixed cost	3,24,49,188	---	17.24%	---	30,91,55,145	---	6.70%	---
Profit	1,91,91,057	---	---	9.25%	45,76,55,491	---	---	9.02%

Source: Annual report-2009 of CMC- Kamal textile mills ltd. and Square textile ltd.

As earlier mentioned, the main objective of the present study is to compare the cost structure between CMC- Kamal textile mills ltd. and Square textile ltd. To satisfy this objective, we can examine which companies cost structure is best- high variable cost and low fixed cost or the opposite? Noted that table-1 revels that Square textile ltd. company's cost structure consists of high percentage of variable cost (93.30%) and low percentage of fixed cost (6.70%) as compared to CMC- Kamal textile mills ltd. of which low percentage of variable cost (82.76%) and high percentage of fixed cost (17.24%). Firstly, it indicates that Square textile ltd. little bit more depending on workers;

where as CMC- kamal textile mills ltd. is slightly more mechanized. However, which companies cost structure is better, no single answer to this question is possible, because both structures have advantages, and both have disadvantages. Best cost structure depends on many factors like, the long run trend in sales volume, year to year fluctuation in the level of sales and the attitude of the owner toward risk. We can examine our selected samples by calculating contribution margin ratio, break-even-point and margin of safety. Contribution margin means how much is left from sales revenue, after covering variable expense, that is contributed toward the covering of fixed cost and then toward profit for the period. Here, CMC-kamal textile mills ltd company's contribution margin ratio is 24.89% and Square textile ltd. company's has that of 15.11%. It indicates that, if CMC-Kamal textile mills ltd. is able to sell one additional unit in coming year, Tk. 24.89% more in contribution margin will become available to help cover fixed cost and ultimate effect goes to profit. Similarly, if Square textile ltd company is able to sell one additional unit in coming year, Tk. 15.11% more in contribution margin will become available to help cover fixed cost and that also effect on profit. In that sense, CMC- Kamal textile mills ltd. has the best cost structure in comparison with Square textile mills ltd. since its C/M ratio is higher and its profit will therefore increase more rapidly as sales increase. This result completely depends on future i.e. presuming that coming year will be the business good year. Reversely, if coming year will be the business bad year then Square textile ltd. enjoys the best cost structure in comparison with CMC-Kamal textile mills ltd. because it's fixed costs are lower and its have lower contribution margin ratio (15.11%), so it will not lose contribution margin as rapidly as sales fall off. Moreover, this cost structure analysis makes it clear that Square textile is less vulnerable to downturns than CMC-Kamal textile. Due to its lower fixed cost, Square textile ltd. has a lower break-even-point (40.31%) and higher margin of safety (59.69%), in comparison with CMC-Kamal textile mills ltd. which has these of 62.84% and 37.16% respectively, therefore, Square textile ltd. will reach to the profit as quickly as CMC-Kamal textile mills ltd. in the periods of sharply declining sales.

Table- 2: Cost of production per unit of CMC- Kamal textile mills ltd. and Square textile ltd.

Particulars	CMC- Kamal textile mills ltd.		Square textile ltd.	
	Cost per unit	Percentage	Cost per unit	Percentage
Raw material consumed	102.63	73.22%	114.04	78.75%
Packing materials	2.20	1.56%	1.30	.90%
Fuel/Power/ Chemicals etc.	6.20	4.42%	5.17	3.57%
Spare parts	6.00	4.28%	7.05	4.87%
Direct labor & overheads	23.14	16.52%	17.24	11.91%
Total	**140.17**	**100%**	**144.81**	**100%**

Source: Annual report-2009 of CMC- Kamal textile mills ltd. and Square textile ltd.

Table-2 revels that, material inputs costs represent large percentage of textile production value which includes basically cost of cotton. The major reason for this large percentage is the decline in the cotton

production in Bangladesh over the last few years. As a result the supply of cotton is insufficient to meet local demand and the textile industries are bound to buy cotton from international market by high price. In the case of CMC-Kamal textile mills ltd. it is little bit less because of availing purchase commission or discounts. Packing materials, fuel, power, chemicals, spare parts etc are almost same for both the companies. As we earlier mentioned that textile industries are highly labor intensive so CMC-Kamal textile mills spend 16.52% and Square textile ltd. spend 11.91% of their total production cost in this head. Here we look, CMC-Kamal textile mills ltd. spend more percentage as compared with Square Ltd. because of providing high salary and fringe benefits.

Problems

The cost structure analysis deals with a specific calculation problem- the division of costs/ expense i.e. separation of fixed and variable cost portion included in total costs. Usually the problem occurs when costs are inseparable, for instance labor cost, lighting & heating cost are shared by several activities. Our selected companies have only limited understanding of cost behavior and lack of knowledge about how a cost structure affects on profitability/ profit stability and on decision making. At inflationary time, both companies are failed to maintain the best cost structure due to unusual price hike of their inputs. For choosing best cost structure, researcher assumes in this study that the unit sales price for both companies are same, but in practice the market price is not constant. Lack of appropriate technology/ tools to collect and analyze cost information management are fail to choice best cost structure. At the time of interviewing with concern person, respondents of both selected companies said that their companies total cost includes a large percentage of step cost which might be posing a problem when they conduct a certain kinds of analysis.

Recommendation

The problems identified in choosing best cost structure both in CMC-Kamal textile mills ltd. and Squre textile ltd. are very important to be solved. Firstly, both companies finance & accounts division are ask to talk with accounting experts who have the best knowledge about cost behavior, cost structure and cost drivers. Both companies' accounts officers should take help from the experts to identify variable cost, fixed cost and step costs, as well as take advice regarding the step cost whether it should be treated as fixed or variable for financial analysis purpose. Secondly, at inflationary time, companies should control the variable cost by searching more purchase discount, and try to control cost without hampering the product quality. Thirdly, for splitting fixed and variable cost, concerns officials should use statistical tools, which are often included in standard spreadsheet program. Finally, both companies should create an environment where workers and managers use cost data routinely in decision making, as well as to set up training program for financials and departments on the importance of cost behavior in budgeting and its effect on decision making.

Conclusion

The textile industry is usually high capital & labor intensive and it is highly automated particularly in developing countries. It consists of spinning, weaving & finishing and the three functions are often undertaken in integrated plants. Our selected both companies are also doing their functions undertake in integrated plants. Understanding the cost behavior, selecting an appropriate cost structure is a critical foundation for profitability. By developing this understanding, managers and employees will begin to think about relative cost behavior issues and try to do possible trading off between fixed and variable costs in their day to day jobs. As consequence, they will learn how can be used for more effective budgeting and profitability/ profit stability related decision making. Best cost structure largely depends on future; it is not obvious which cost structure is better. Both have advantages and disadvantages. CMC-Kamal textile mills ltd. with its higher fixed cost will wider swing in operating income as changes take places in sales with greater profit in good year and greater losses in bad year. Square textile ltd. with its low fixed cost and higher variable cost, will enjoy greater stability in net operating income, and will be more protected from losses during bad year, but at the cost of lower net operating income in good years. In fine we can say that select the best cost structure largely depends on the attitude of the owner towards the risk.

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Appendix

Summary of relevant accounting calculations of the study

Particulars	Method of computation	Significance
Contribution margin ratio	Sales – Variable cost ---------- X 100 Sales For CMC- Kamal textile mills ltd: 20,74,53,709 – 15,58,13,464 ---------- X 100 20,74,53,709 = 24.89% Similarly, for Square textile ltd. = 15.11%	Contribution margin contributes toward the covering of fixed cost and then toward profits for the period. High contribution margin contributes positively in business good year, and negatively in business bad year.
Operating profit Ratio	Operating profit ---------- X 100 Net Sales For CMC- Kamal textile mills ltd. 1,91,91,057 ---------- X 100 20,74,53,709 =9.25% Similarly, for Square textile ltd. = 9.02%	Helps in determining the operating efficiency of an organization.
Break-even-point (in Tk.)	Fixed cost ---------- C/M ratio For CMC- Kamal textile mills ltd. 3,24,49,188 ---------- .2489 = Tk. 13,03,70,381 13,03,70,381 In percentage = ---------- = 62.84% 20,74,53,709 Similarly, for Square textile ltd = 40.31%	The level of activity at which an organization neither earns a profit nor incurs a loss. A low break-even point indicates that the company able to reach the profit quickly and vice-versa.
Margin of Safety (in Tk.)	Actual Sales – Break even sales For CMC- Kamal textile mills ltd. 20,74,53,709 - 13,03,70,381 = 7,70,83,328 7,70,83,328 In percentage= ---------- X 100 20,74,53,709 = 37.16% Similarly, for Square textile ltd = 59.69%	The excess of actual sales over the break even volume of sales. A high margin of safety shows a good expectation of profit and vice-versa.

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Changing World Economic and Financial Scenario

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ABSTRACT

The dawn of 21st century has changed the scene of the world economy and shifted the centre of economic growth from Western hemisphere to the Asian Continent. The global financial crisis of 2008 and European debt crisis of 2010 have exposed inherent weakness of G-7 economies, which are facing the challenges of twin deficits, falling productivity, rising debts and aging population. In contrast, the emerging economies particularly, China, India and Brazil, have shown robust economic growth during 2000-2010. The objective of this paper is to measure the changes taken place in world economy during 2000-2010 and its impact on assets allocation, employment, poverty, and allocation of resources. For this purpose the author has selected total 14 countries as a sample and divided them into two groups: G-7 and E-7. The G-7group Include USA, Germany, France, UK, Italy,Japan and Canada while E-7 contains China, India, Brazil, Russia, Indonesia, Turkey and Pakistan.

The methodology used in the study is to compare different economic and financial indicators of these two groups of countries in order to obtain desired results. Mostly time series and cross sectional secondary data, collected from data base of IMF, World Bank, US Federal reserves, relevant international research journals and books, has been used. Different statistical techniques such as trend analysis and ratio analysis have been applied to measure the changes in selected variables. The results of the study are very encouraging. We found that increase in national income of emerging economies has brought trickle down effects and reduced poverty and inequality level in emerging economies. Only in China, about 400 million people have come out of poverty trap due to rising employment opportunities. The share of E-7 economies in the world R & D has increased from14% in 2001 to 20.1% in 2007, while the share of G-7 economies has declined by 2.4% during the same period.

The study found the declining trend of productivity level in G-7 countries vis-à-vis E-7 countries. The anti-migrants policy of G-7 countries is one of the contributing factors in the decline of productivity. This study endorses the views of Blanchard (1997),David Romer (2001), Yuan Langwiler (2004),David C. Colander (2004), Andrew Glyn(2006) and John Hawksworth (2007) who contended that the USA will no more be a world economic power and China will likely to overtake her as world economic leader by mid of 21st century.

JEL Classification Code: B26, F01, M16, M21

1. INTRODUCTION

The term "Emerging Market Economies" is coined in 1981 by Antoine W.Van Agtmael of International Finance Corporation (IFC) of World Bank. Accordingly, an emerging market economy (EME) is defined as a developing economy with low to middle per capital income, that have undertaken economic development and reform programs, in the market-oriented line and have begun to "emerge" as significant players in the global economy. Such economies constitute approximately 80% of the global population.

The term "Emerging Market Economies" is generally used to distinguish those countries which are growing economically very fast from those whose economies are stagnant and have no potential to grow. In the 1980s four East Asian economies recorded impressive economic growth and they were declared "Asian Tigers". Their fast economic growth facilitated them to catch up advanced economies. These economies were termed as "Newly Industrialized Economies (NIEs). But their size and population are so small that they could not bring any substantial impact on world economy. Moreover, speculative attack in 1997 on the currencies of Asian Tigers jolted their economies and all gains achieved during 1980s and 1990s were wiped out within a few months. Since then these economies lost attraction for researchers and investors.

The decades of 1950s and 1960s were the period of high productivity, high living standards, high income, high level of economic growth and high employment in the advanced countries. However, productivity growth was slowdown in 1970s and 1980s due to oil shocks in 1973 and 1979, collapse of Bretton Wood financial system and US's engagement in the Vietnam War as well as Cold War with the Soviet Union. The Soviet Union was disintegrated as a result of Afghan War in 1980s and consequently the United States was emerged as a sole Super Power of the World. The dot.com revolution in 1990s in the United States restored its productivity level for a short time.

The opening of economies under world trade organization (WTO) in 1997 and China's entry into it in 2001 changed the whole world economic scenario. China's cheap goods replaced costly goods of the advanced countries. It brought revolutionary changes in the international trade. In order to take advantage of the cheap labor, size of big markets and billion of consumers, the multinational companies heavily invested in China, India, Brazil, Indonesia and other such like economies. This stimulus big push turned these slow-moving economies into fast rising economies.

2. OBJECTIVES OF THE STUDY

We have intended to study the phenomenon of the growth of emerging market economies as well as the slowdown of advanced economies in this paper. It is the interesting juncture of history that all advanced free market economies have been facing the problems of productivity slowdown and twin deficits while certain developing economies have been recording robust economic growth. This situation is amazing particularly for the analysts and researchers.

The mainstream economists claim that the robust growth of emerging

market economies is the result of free market reforms followed by them but the opponent question, if it is true, why are free market advanced economies of G-7 themselves are declining and are facing repeated financial crisis? If the free market economic reforms are not responsible for the vertical and horizontal growth of emerging economies what are other factors which have substantially contributed in their growth? This question is valid to be explored. It is the main objective of this paper.
Another objective is to see whether it is the repetition of history that after certain period of time the leadership of nations is shifted from one economy to another or it is a new economic phenomenon that free market economies are declining while newly open semi-free market economies like China and India are rising. Is it the failure of economic managers of advanced economies to cope with the new economic challenges or is it the capability of the leadership of emerging economies to run their economies efficiently and take benefit from the gap created after opening of the economies under WTO? To trace the answer to this question is another objective of this paper.

3.1 SCOPE OF THE STUDY

The scope of the study is very vast because the vertical and horizontal economic growth of emerging economies and continuous decline of advanced economies is the hot topic being widely discussed not only by leading independent research scholars at national levels in different countries but also the staff economists of world financial institutions like IMF and the World Bank. All monthly and annual reports of IMF and the World Bank have been paying special attention on the changes being taken place in the emerging economies vis-à-vis advanced economies. This has made the topic of the growth of emerging economies a point of hot debate in the research community, particularly after 2008 world financial crisis which was originated from the United States and taken the whole world particularly advanced economies into its fold. As this crisis was under investigation the debt crisis of European Union was emerged on the world economic scene in 2010.
These two crises in the advanced economies have exposed their inherent structural weakness and their aging economic infrastructure and population. In contrast, these crises affected the emerging economies on very nominal scale. According to IMF (World Economic Outlook, April 2010) "Many emerging economies have resumed a high rate of growth and a number have begun to moderate their accommodative macroeconomic policies in the face of high capital inflows. Given prospects for relatively weak growth in the advanced economies, the challenge for emerging economies is to absorb these inflows and nurture domestic demand without triggering a new boom-bust cycle." It reveals that growth in the emerging economies in future will continue on moderate scale as compared to the advanced economies where growth is predicted to be weak. As this situation presents two opposite scenario different researchers have analyzed it in different angles. Most of the researchers based their analysis on one or two variables such as productivity, unemployment or capital inflow. Some paid concentration on advanced economies while other analyzed emerging economies on limited scale. None of the study has discussed the whole economic

scenario of advanced and emerging economies in totality or has made comparative analysis of these two groups of economies. From this point of view, our study is unique from all previous studies and its scope appears to be vast. Our study also involves policy implications because it helps the policy makers and economic managers understand how different variables are behaving in two different economic conditions prevailing in the emerging and advanced economies.

3.2 RESEARCH QUESTIONS

The core questions of this dissertation are that why are emerging economies growing at a time when all advanced economies are simultaneously declining? Is it a natural phenomenon or the result of free mobility of capital and technology? Is it the end of the monopoly of certain advanced economies on skilled labor, capital and technology? Are the emerging economies changing into knowledge-based efficient economies or advanced economies loosing their efficiency of labor and capital?

3.3 SAMPLE

For our this comparative study of the advanced and emerging economies and their effects on the changing world economic scenario, we have selected seven countries such as the United States, Japan, Germany, United Kingdom, France, Italy and Canada, which are commonly known as G-7 countries. Similarly, we have also selected seven Emerging Economies such as China, Russia, India, Brazil, Turkey, Indonesia and Pakistan. We have named these countries as E-7 group. We have taken the United States and China as the leaders of G-7 and E-7 countries groups respectively for the purpose of comparison because the United States among G-7 countries is the big economy while China among E-7 countries is the big economy from the view point of its its GDP size, population and territory.

3.4 STUDY PERIOD

The specific proposed period for this study is 2000-2010. However, in general we can go beyond 2000 in order to investigate the steady state period of advanced economies (1950s-1960s) and the cause of their slowdown since 1970s due to continuous slowdown and rising ratio of ageing population. We have termed the G-7 group of countries as "aging economies". We have also investigated the impact of economic reforms introduced by the emerging economies particularly China and India during 1980-1990s. Thus, we will not restrict ourselves to one decade of 2000-2010.

3.5 STUDY DESIGN

As we have mentioned above that we have named G-7 countries as aging economies and E-7 as emerging economies. We have taken the United States as leader of G-7 and China as leader of E-7. We will concentrate particularly on these two economies because China has overtaken six members of G-7 and is running fast to catch up with the United States. It is expected that it will come at par with the United States by 2025. We will pay attention on the ageing economy of the United States as it is loosing the status of sole world economic and military power. We will also study the rest of six advanced economies such as Japan, Germany, United Kingdom, France, Italy and Canada as well as six emerging economies like India, Russia, Brazil, Turkey,

Indonesia and Pakistan. We have intended to examine variables relating to the strengths and weakness of G-7 and E-7 economies and the compare their different economic and social indicators to draw final conclusion. This study is purely a descriptive nature. However, statistical tools will be used wherever we feel their needs to highlight the fact and abstract realities.

3.6 HYPOTHESIS

The hypotheses of the study are as under:-

1. Whether the E-7 economies mentioned above are catching the G-7 economies with fast speed.
2. Whether the E-7 economies have potential to become world economic powers and come at par with G-7 economies in future.
3. Whether the decline of advanced economies have some valid grounds or a temporary phenomenon.
4. Whether the world economic scenario is changing rapidly and the centre of economic power is shifting from the Europe to Asia.
5. Whether the growth of emerging economy is a potential reality.

3.7 DATA AND SOURCES

Time series, cross sectional and panel data will be used in this study. The data will be secondary in nature and be collected from IMF, World Bank, Asian Development Bank, US Federal Reserves, and the People Bank of China and Central Bank of Europe. The specific data relating to the countries included in this study will be collected from the Central Banks and Finance Ministries/Divisions of relevant countries. Latest business data will be collected from international database of Bloomberg, Associated Press and Reuters. Apart from this, necessary data will also be collected from relevant books and international journals.

3.8 Variables

The specific variables to be studied in this dissertation are as under:-

1. Gross Domestic Products (GDP).
2. Debt.
3. Budget Deficit.
4. Foreign Exchange Reserves.
5. Balance of Payments.
6. Unemployment Rate.
7. Capital Stock
8. Population and its growth rate.
9. Natural Resources.
10. Labor Productivity
11. Quality of Human Capital.
12. Research & Development spending.
13. Level of poverty.

4. ASSUMPTIONS (PARAMETERS) OF STUDY

Most of the hypothetical predictions made during 20th century has proved wrong because the countries having achieved steady state (golden age) of economic growth in previous century are facing problem of economic survival due to negative growth. In contrast, the countries

about which predictions were made to be underdeveloped and poor are recording continuous vertical economic growth from 6 percent to 10 percent per annum. It reveals that the world economy is dynamic and its axis is variables. The task of researchers is to measure pace of change in these variables. But when they measure certain variables at some point of time they hold other variables constant otherwise their estimates are to be incorrect. The reason is that in world is dynamic, positive and negative forces are working in opposite directions simultaneously.

In this paper, we have formed some assumptions to measure changes in different indicators (variables) of world economy as well as change the centre of economic growth from Europe to Asia. These assumptions are as under:- The countries having recorded certain level of GDP growth will not deviate from their development path to maintain level of equilibrium.

1. The countries having accumulated capital stock and human capital will continue to maintain its existing level.
2. There will be no change in the technology.
3. There will be not mass migration of labor from one region to other.
4. There will be no natural calamities and disasters.
5. There will be no change in the level of natural resources.
6. There will be no wars among leading nations.
7. There will be free mobility of capital and technology.
8. There will be no international economic embargo like OPEC oil embargo in 1973.
9. There will be no new innovations.
10. There will be no change in existing population growth rate.
11. There will be no abrupt change in the real exchange rates.
12. All economies will operate under comparative and competitive advantages.
13. There will be no political upheavals in any region.

5. LITERATURE REVIEW

5.1 G-7 (AGEING) ECONOMIES

Hagemann and Nicoletti (1988) analyze the economic effects and policy implications of ageing population in the developed countries. They said that population growth have been falling in almost all OECD countries. The average population growth was 2.66 percent in Canada, 0.88 percent in France, 0.66 percent in Germany 0.78 percent in Italy, 1.11 percent in Japan, 0.39 percent in Britain and 1.73 percent in the United States in `1950, respectively. In 2010, the average population growth in Canada is 0.65 percent, 0.14 percent in France, -0.55 percent in Germany,-0.20 percent in Italy, 0.12 percent in Japan, 0.08 percent in the Britain and 0.53 percent in the United States. They predict that the population under age 15 would decline significantly from an average of about 23 percent to 17 percent in 2030. The population under age 15 was 21.8 percent in 1980 in these seven countries, which has declined to 14.2 percent in 2010. The population over 66 year age was 12.52 percent in 1980, which has increased to 15.5 percent in 2010.The ageing population is the highest in Germany around 20.2 percent while

it was 17 percent in Japan and Italy. The percentage of ageing population in the United States and UK in 2010 was 12.6 and 14.5 respectively. The overall old age dependency ratio in these countries is estimated to be 24.17 percent in 2010. The analysis by the OECD (1988a) and IMF (Heller et al, 1986) considered the implications of population ageing for the level and structure of social expenditures, broadly defined to include public outlays on education, family assistance, health care, unemployment insurance and pensions. These studies show that the share of social outlays could rise significantly as a consequence of demographic changes in advanced countries. Other consequences include that output of a relatively smaller workforce will in the future have to support a relatively larger dependent population. Because old-age pensions are financed by taxes on payrolls, labor as opposed to capital will bear the burden of maintaining public pensions. It may also affect grow in advanced economies in future- (Hagemann and Nicoletti, 1988)

Blanchard (1997) examined the rise and fall of world empires in historical perspective. He argues that from the end of the Roman Empire to roughly year 1500 there was essentially no growth of output per capita in Europe: Most workers were employed in agriculture, in which there was little technological progress. Because agriculture share of output was so large, inventions with applications outside agriculture could contribute little to overall production and output. From about 1500 to 1700 growth of output per capita turned positive but small, around 0.1 percent, increasing to 0.2 percent from 1700 to 1820.Even during the industrial Revolution, growth rates were not high by current standards. The growth rate of output per capita from 1820 to 1950 in the United States was only equal to 1.5 percent. He maintained that one of the scales of human history, therefore, growth of output per capita is a recent phenomenon. In light of the growth record of the last 200 years or so, what appears unusual is the high growth rate achieved in the 1960s rather than the lower growth rate since 1973.

He emphasizes that history also puts into context the convergence of OECD countries to the level of U.S. output per capita since 1950. The United States was not always the world's economic leader. Rather, history looks more like a long-distance race in which one country assumes leadership for some time, only to pass it on to another and return to the peak or disappear from sight. For much of the first millennium and until the fifteenth century, China probably had the world's highest level of output per capita. For a couple of centuries, leadership moved to the cities of northern Italy. It was then assumed by the Netherlands around 1820, and then by the United Kingdom from 1820 to around 1870.Since then, the United States has had the lead. He predicted that seen in this light, history looks more like leapfrogging (in which countries get close to the leader and the overtake it) then like convergence, (in which the race become closer and closer).If history is any guide, the United States may not remain in the lead much longer- (Blanchard ,1997).

Hudson (2003) outlined the U.S. economic model and its strategy to deal with the European countries during last two centuries. He says that the American School of political economy lend by Henry Carey,

E.Peshine Smith and their followers believed that their nation's rise to world power would be achieved by protecting their economy from that of Britain and other European nations. The objective was to create nothing less than a new civilization, one based on high wages as a precondition for achieving even higher productivity. This result would be a society of abundance rather than one whose cultural and political principles were based on the phenomenon of scarcity.

The laiserz-faire ideology that American industrialists had denounced in the nineteenth century, and that the U.S. Government would repudiate in practice in the 1970s and 1980s, served American ends after World War II. Europe's industrial nations would open their doors and permit U.S. investors to buy their extractive industries of their former colonies especially into Near Eastern oil. These less developed regions would provide the United States with raw materials rather than working them up into their own manufactures to compete with U.S. industry. They would purchase a rising stream of American foodstuffs and manufactures, especially those produced by the industries whose productive capacity had expanded greatly during the war. The resulting U.S. trade surplus would provide the foreign exchange to enhance US investors to buy up the most productive resources of the world's industry, mining and agriculture.

This idealized model never materialized for more than a brief period. The Koran War changed the U.S. balance of payments from surplus to deficit. Confrontation with Communism became a catalyst for U.S. military and aid programs abroad since 1950s.

Within a decade the United States, the only country capable of financing a worldwide military program, began to sink in the mire that had bankrupted every European power that experimented with colonialism. Hudson (2003) argues that America's shift from a creditor to a debtor strategy of world economic domination in the 1960s and 1970s reversed the kind of global relationships that had characterized the 1920s. At that time it was the U.S. balance of payments surplus on government account that untracked the world economy. Since the 1960s it has been the U.S. payments deficit that has done so, initially stemming from the government's overseas military spending. During 1950s-1970s this military spending was responsible for the entire U.S. payments deficits. In today's world the form of breakdown is likely to be financial, not military. Vietnam War showed that neither the United States nor any other democratic nation ever again can afford the foreign exchange costs of conventional warfare, although the periphery still is kept in line by American military initiatives in Iraq and Afghanistan. He contends that the U.S. deficit is still disrupting the world, but its character has shifting from a military focus to one of insisting that foreign economies supply the consumer goods and investment goods that the domestic U.S. economy no longer supplying at it post industrializes and becomes a bubble economy, while buying American farm surpluses and other surplus output .In the financial sphere, the role of foreign economies is to sustain American stock market and real estate bubble, producing capital gains and asset price inflation even as the U.S. industrial economy is being hollowed out-(Hudson,2003).

Glyn (2006) analyzed the causes of the productivity slowdown in the advanced economies. He argues that the advanced economies recorded slowdown in productivity growth in the early 1970s after enjoying the period of golden age (1950s and 1960s). This slowdown was taken by the policy makers of these countries as temporary phenomenon and believed that output could grow by some 5.5% per year over the period 1975-80.However, the slowdown proved to be lasting and made a significant contribution to the turmoil of the 1970s. He argued that the most basic indicator of productivity is output per hour worked. In the U.S.A labor productivity growth halved after 1973 and stayed very low until the 1990s. In Europe and Japan labor productivity growth, which had been much faster than in the United States during the 1960s, barely halved after 1973 and fell again in the 1980s.On contributory factor to the productivity slowdown was the lower level of investment. Between 1973 and 1990 the rate of growth of the capital stock in both Europe and Japan fell by more than one-third compared to the period 1960-73 and from the later 1960s business capital accumulation has been on a downward trend in the United States. A very detailed study for the USA estimated that about half of the slowdown in labor productivity growth could be explained by slower growth of capital stock.

5.2 E-7 (EMERGING) ECONOMIES

Romer (2001) analyzed growth miracles and disasters in the perspective of new growth theory. He discussed in detail the contribution of physical capital, human capital and output for given amount of capital in his growth model. He also calculated the share of different factors including technology in the growth and also explained correlation between population growth and technological innovations by citing different empirical studies. His analysis provides a framework for understanding the most extreme cases of change in countries' relative incomes: growth miracles and disasters. He pleads that a period of very rapid or very slow growth relative to the rest of the world can occur as a result of either a shock that pushes an economy very far from its long-run path or a large change in fundamentals. Shocks large enough to move an economy very far from its long-run path are rare, however. The best example might be the impact of World War II on West Germany. On the eve of the war, average income per person in the region that became Western Germany was about three-quarters of that of the United States. In 1946 after the end of the war, it was about one-quarter the level in the United States. West German output grew rapidly over the next several decades as the country returned toward its long-run trajectory. In the 20 years after 1946, growth of income per person in West Germany averaged more than 7 percent per year. As a result, its average income in 1966 was again about three –quarters of that of the United States (Maddison, 1975). In contrast, East Germany suffered unfavorable change in fundamentals in the form of the imposition of communism. Thus its recovery was much weaker. Romer (2001) contends that the growth miracles and disasters are usually the result of large changes in fundamentals. Further, since social infrastructure is central to fundaments, most growth miracles and disasters are the results of large, rapid changes in social infrastructure. He further argues that growth miracles and disasters appear to be more common under

strong dictators because large and rapid changes in institutions are difficult in democracies. More surprisingly, there is not a clear correlation between the dictators' motives and the nature of the changes in social infrastructure. Large favorable shifts in social infrastructure can occur under dictators who are far from benevolent (to put it mildly), and large unfavorable shifts can occur under dictators whose main objective is to improve the well-being of the average citizen of their countries. Some apparent examples of major shifts toward favorable social infrastructure, followed by periods of miraculous growth are Singapore and South Korea around 1960,Chile in the early 1970s and China around 1990. He predicts that it is possible that the evidence about what types of social infrastructure are most conducive to high level of average income is becoming increasingly clear, and as a result many of the world's poorer countries are beginning, or are about to begin, growth miracles-(Romer, 2001).

Lingwiler (2004) discussed different Capital Assets Pricing Models (CAPMs) and comparatively analyzed the declining trends in return on financial assets in the advanced economies. He empirically examined the causes of this decline by discussing all available mathematical models. He predicted the continuous rise of real economy (goods market) and decline of nominal economy (money markets). He explained a model of exchange between young and old generations in a very interesting ways. His hypothesis is worth reading in the context of our study. Lingwiler argues that a typical life from a purely financial point of view consists of first accumulating assets when young and working and then disposing of these assets when old and retired. He argues that a change in the age composition of the population perhaps result from a demographic shock; can have a strong impact on asset prices. He emphasized that the bullish housing market of the 1970s in the advanced countries when the earliest baby boomers were in their thirties, was an aftermath of baby boom (Mankiw &Well). Similarly, the bullish stock market of the 1980s and 1990s was driven by the baby boomers' search for investment opportunities in anticipation of retirement (Bakshi & Chen, 1994). But birth control ended the baby boom when the baby boomers start liquidating roughly from 2010 onwards; they will have trouble selling their assets to the next generation because the next generation is so much smaller. He concluded that baby boom and baby burst is a demographic shock that occurred primarily in the industrial countries. But the world is a large. May be Chinese will buy the assets of American and European baby boomers? In that case, the meltdown of asset prices could be avoided and the baby boomers will be bailed out. Capital will flow from the West to the emerging economies. Accordingly, the advanced economies will run large deficits. Siegel (1998) says it well:" First they [emerging economies] will pay off their debts, they acquire ownership of their own capital and eventually buy the assets of the developed world." In the end the world will be more equitable place, he surmised.-(Lingwiler,2004).

Miles and Scott (2005) measure the influence of Chinese growth on the world economy. They view that the substantial economic growth of South Korea, Singapore and Hong Kong did not bring a large effect because they remain small-to-medium-sized economies due to the size

of their population. For example, South Korea has population of 47.3 million, while Hong Kong and Singapore have only 6.7 million and 4.1 million, respectively. Therefore, rapid growth in these countries has not substantially affected the world's economy. However, the same cannot be said about China with its enormous population of 1.3 billion. China seems to be embarking on the same growth pattern as Southeast Asia 30 years ago, with huge increase in population and employment, high level of investment and a sustainable substantial shift of resources from agriculture into industry. The result has been rapid rates of growth suggesting that China may be able to repeat a similarly rapid economic transformation as the other East Asian economies did. They pointed out that the vast majority of growth arises from increase in factor inputs rather than total factor productivity (TFP), although the switch from socialist economic policies to market based ones that began in 1978 has been a growing role for TFP. China is perusing a development path similar to that of the Asian Tigers of 30 years ago-large capital accumulation and increase in employment. They suggest that China can produce decades of fast growth based solely on high capital accumulation rather than reliance on technological progress. China will not need to focus on improving TFP to improve its standard of living for many years-(Miles and Scott ,2005).

Henry and Kannan (2006) examined the return on investment in emerging markets vis-à-vis the United States in the period from 1976 to 2005.They included 30 emerging economies into their empirical study. They found that emerging economies grew at an average rate of 5.1 percent per year, roughly twice the average growth rate of the United States. They said that studies that compute stock returns arithmetically find that emerging markets have higher annual returns than the U.S. For instance, Harvey (1995) reports a 20.36 percent dollar return on the emerging market composite index as compared to 13.63 percent return on the U.S. market. During the period 1976-2005 Average returns in the emerging markets is estimated around 23.75 percent while it was 9.5 percent in the United States. (Henry and Kannan ,2006)

6. BRIEF PROFILE OF G-7 COUNTRIES

The G-7 countries are the wealthy nations of the world. Their aggregate size of GDP is US$28,991 billion while their per capita income is the highest on average US$40,024. Their total population is 741.5 million. They are the most industrialized and most advanced countries and they are regarded as innovations-driven economies. The size of their GDP on the basis of purchasing power parity (PPP) is 40 percent of total world. Their manpower is skilled and their human capital is valuable due to high quality of know-how. They possess advanced technology and the survival of these economies is depended upon new inventions and innovations. They have vast industrial structure and produce goods and services on massive scale. They have a large network of multi-national corporations operating all over the world and generating billions of dollars income every year. However, since 2000 these advance economies of G-7 countries have been facing multi-dimensional problem such as low productivity, high unemployment, budget and trade deficits,

high volume of debt and debt services, shrinking trade and credit crisis. Their

Aggregate debt-to-GDP ratio is 102.32 which is an alarming level. Similarly, their combined savings rate is 16.74 percent, which is very low as compared to the E-7 countries. Another worrying problem of G-7 countries is that their population is rapidly aging and due to this factor total factor productivity (TFP) and volume spending in the shape of pension, social security and Medicare are increasing year after year. The combined unemployment rate is 7.7 percent in G-7 countries. The United States and France are the two countries where unemployment rate is more than 9 percent.

The poverty level in the United States has grown to 17% while it is reported have around 24 percent in the black population. The women and children are more suffering from the level of poverty. The growing level of unemployment and poverty rate has made the lives of low-income persons miserable and they are struggling hard to maintain their living standard. The policies being followed by the leadership of European Union and the United States to cut expenditures to reduce budget deficit are creating multi-dimensional problems in these societies. The key indicators of G-7 countries are given in the following table 1.

Table 1: KEY INDICATORS OF G-7 COUNTRIES-2009

INDICATORS	USA	UK	Japan	Germany	Italy	France	Canada	Total
Population (millions)	314.7	61.6	1,272	82.2	59.9	62.3	33.6	741.5
GDP (US$ billion).	14,256.3	2,183.6	5,068.1	3,352.7	2,118.3	2,675.9	1,336.4	28,991
GDP Per Capita (US$)	46,381	35,334	39,731	40,875	35,435	42,747	39,669	40,024
GDP (PPP) as share (%) of World total.	20.46	3.1	6	4.03	2.51	3.03	1.85	40.98
Debt-to-GDP Ratio	82.20	68.20	217.6	72.5	115.80	77.40	81.60	102.32
Saving % of GDP	8.90	12.60	23.10	22.10	15.70	16.70	18.50	16.74
Primary Education Enrollment	92.00	99.6	100	98.60	98.20	98.40	99.50	97.96

6.1 BRIEF PROFILE OF E-7 ECONOMIES.

The emerging economies like China, India, Russia, Brazil, Indonesia Pakistan and Turkey included into our sample of study have recorded vertical economic growth during 2000-2010. These seven economies are the biggest economies of the world if their total population is taken into account. Their aggregate population is 3,364 million, which is around three times more than those of G-7 countries. Although, the size of their GDP is less two times of the G-7 countries but the share of their GDP (at purchasing power parity) of world total is steeply rising and has increased to 28.01 percent. Their oval debt-to-GDP ratio is also moderate and it is 38.42 percent. Their aggregate saving rates are around 27.15 percent, which is far ahead from the G-7 countries. The individual saving rates of China, India and Indonesia is 52.30, 37.50 and 32.90 percent respectively. This has become possible due to high surplus in balance of trade and it facilitated them to accumulate huge foreign exchange reserves. The Chinese foreign exchange reserves have crossed $2.65 trillion by September, 2010, which is highest in its history

and now China stands number one in the world for accumulation of reserves through their consistent exports growth.

The end results are that poverty, unemployment and income inequality are decreasing in these country and their economies are rapidly heading towards efficient and innovative economies after passing through initial transition period. They possess huge stock of human capital and younger generation to activity contributes into economic activities. Their productivity level is also accelerating due to education, training, and leaning by doing. They are heading from imitating economies to innovative economies. Four emerging economies such as China, Russia India and Pakistan are declared nuclear powers and have latest missile technology. The huge population, which was regarded as a burden on the economies of E-7 countries in past has transformed into a valuable human capital, which is regarded as one of the factor of production and its share in total factor productivity is to have estimated around 13 percent.

Within a short span of time (2000-2010), many Asian and Latin American Economies such as China, India, Brazil, Turkey, Russia, Indonesia, Pakistan, etc, recorded impressive economic growth. Particularly, China's vertical economic growth surprised the whole world. Now it is regarded as the engine of growth and its growth impact on world economy is stated to be substantial.The sum of China's total exports and imports amounts to around 70% of its GDP, against only 25-30% in India or America. In 2010, China is to account for 10% of world trade, up from 4% in 2000.

In the last decade of 20th century, China was regarded as poor country of the world by the IMF and World Bank but in July 2010 it has emerged as second largest economy of the world. Now it is only behind the United States and it is predicted that it is expected to overtake the United States in 2025. It has left behind all six wealthy members of G-7 countries such as Japan, Germany, France, United Kingdom, Canada and Italy and proved all past predictions about its stagnant economy false. The size of Chinese economy has multiplied three times during 2000-2010. It has accumulated foreign exchange reserves to the tune of US$2.65 trillion by Sept, 2010, which is the highest in the world. It recorded around ten percent consecutive GDP growth since 2000, which is not less than a miracle. Its annual exports in 2009 were US$1.204 trillion and current account balance was US$297.1 billion.

India, Brazil, Russia, Turkey, Indonesia, and Pakistan are also among those countries whom researchers have declared emerging market economies. After China, Indian economic growth is also very impressive. Its GDP has almost doubled from $469 billion in 2000 to $929 billion in 2010. India IT sector has recorded tremendous growth during this period. Some analysts are regarding India as the fourth largest economy in the world with a GDP of around 30% of the US and rapidly catching up with Japan.

The stated facts prove that emerging market economies have become an economic reality. The central feature of this new reality is the change of growth engine from developed nations to emerging economies. The salient features of the emerging economies are stated as under:-

- Growth rates from 2007-2010 have been greater in emerging economies particularly in China and India than in the developed economies and this trend is predicted to continue in future.
- Growth rates in the developed economies are likely to be muted over next five years. The U.S. growth could fall to around 2 to 3 percent due to debt exhaustion at household level, high level of unemployment, low savings, weak housing and the consumer's poor debt-to-income ratio.
- Emerging markets are already making a significant impact on world trade. According to IMF their exports account for 43% of the world totals and they are responsible for nearly half of global economic output. They also hold some 70% of the world's foreign currency reserves.
- Relative fiscal health and an export boom have resulted in a build-up of foreign currency reserves among emerging economies. Accordingly, creditor nations such as China are now financing the debt of industrialized nations including the United States.
- Many emerging market economies run disciplined fiscal and monetary policies, which have produced a steady increase in the credit quality of emerging market bond issue. The average credit quality of countries represented in the widely followed JP Morgan emerging markets bench-marks for local bonds is now solidly investment grade.
- The accumulation of wealth in certain countries is creating new pools of capital such as sovereign wealth funds. These funds are playing an influential role in global markets and are likely to drive new capital allocation trends.
- The likely higher growth for emerging economies is likely to higher corporate profits, which is likely to drive up stock prices of emerging market companies, making them more attractive for local and foreign investors.
- According to IMF World Economic Outlook, April 2010, the public debt problem in emerging economies is more localized-as a group, these economies public debt ratios are about 30 to 40 percent of GDP and it can be reduced further due to growth momentum.
- Many of the emerging Asian economies particularly China can afford to maintain an expansionary fiscal stance as it seeks to rebalance externally generated and domestically driven growth, including by expanding subsidized health insurance for rural workers and strengthening its pension system as compared to advanced economies, where entitlement spending has become a major part (15%) of their budgets.
- Spatafora and Jaumotte (2007) disclosed that between 1981 and 2001, the number of people living in extreme poverty has declined dramatically in East Asia (by over 400 million in China lone). The population below poverty line in China in 2007 was only 2.8 % as compared to 13% in the United States. This reveals positive growth impact on poverty in emerging economies.

The key economic and financial indicators of E-7 countries, given in the following table 2, are self-explanatory.

Table 2: KEY INDICATORS OF E-7 COUNTRIES-2009

INDICATORS	China	India	Russia	Brazil	Indonesia	Pakistan	Turkey	Total
Population (million)	1,345.80	1,198	140.9	193.7	230	180.2	74.8	3,364
GDP (US$billion)	4,909.00	1,238	1,229.2	1,574	539	166.5	615.3	10,271
GDP Per Capita (US$)	3,678	1,031	8,694	8,220	2,329	1,017	8.723	
GDP (PPP) as share (%) of World total	12.52	5.06	3.05	2.87	1.38	0.63	1.25	28.01
Debt-to-GDP(%)	16.90	73.10	8.50	48	31.10	46.2	45.20	38.42
Savings(Rate) to GDP	52.30	37.50	21.90	15	32.90	14.80	16.4	27.15
Primary Education Enrollment	99.50	89.8	99.80	94.2	95.70	94.7	66.1	91.4

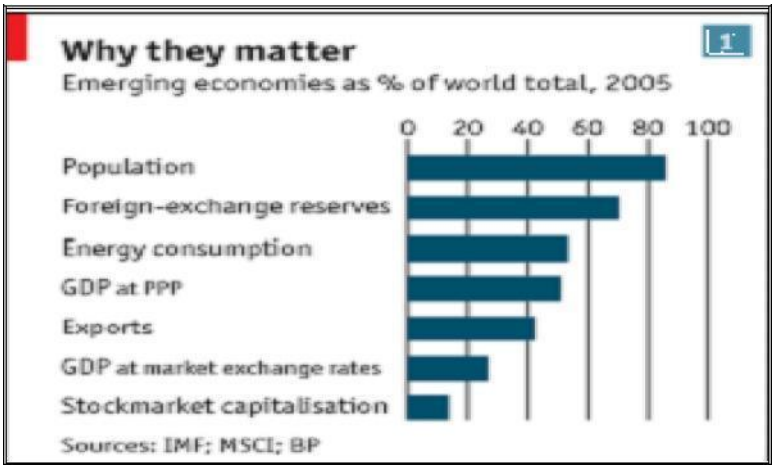
Source: The author made these calculations on the basis of data taken from Global Competitive Report,_2010-2011.

7. CHARACTERISTICS OF EMERING ECONOMIES

In order to understand the importance of emerging economies it is necessary to look into their different characteristics, which have made them distinguished from other countries. For this purpose, we have intended to explain certain important characteristics of the emerging economies. According to The Economist (2006), the combined output of emerging economies in 2006 reached an important milestone: it accounted for more than half of total world GDP (measured at purchasing-power parity). This means that the rich countries no longer dominate the global economy. The developing countries also have a far greater influence on the performance of the rich economies than is generally realized. Emerging economies are driving global growth and having a big impact on developed countries' inflation, interest rates, wages and profits. As these newcomers become more integrated into the global economy and their incomes catch up with the rich countries, they will provide the biggest boost to the world economy since the industrial revolution.

7.1 BIG SIZE OF ECONOMIES

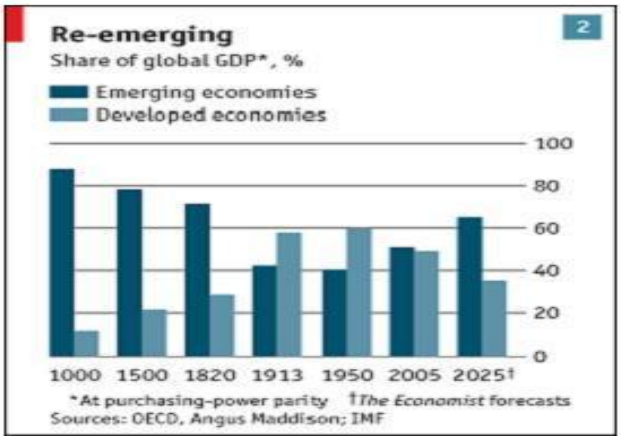
A question arises why the emerging economies are so important and are widely discussed by the researchers all over the world? The reason is that their territorial and population size is very big and their growth momentum is very impressive. This is highlighted in the Figure 1 that shows the size of population, volume of foreign exchange, energy consumption, GDP at Purchasing power parity, volume of exports, GDP at market exchange rates and Stock Market capitalization.



The Figure shows that their share of world exports has jumped to 43%, from 20% in 1970. They consume over half of the world's energy and have accounted for four-fifths of the growth in oil demand in the past five years. They also hold 70% of the world's foreign-exchange reserves. Since 2000, the annual growth of Emerging economies has averaged almost 7%, its fastest pace in recorded history and well above the 2.3% growth in rich economies. The International Monetary Fund forecasts that in the next five years emerging economies will grow at an average of 6.8% a year, whereas the developed economies will notch up only 2.7%. If both groups continued in this way, in 20 years' time emerging economies would account for two-thirds of global output (at purchasing-power parity).

7.2 RISING SHARE OF GLOBAL GDP

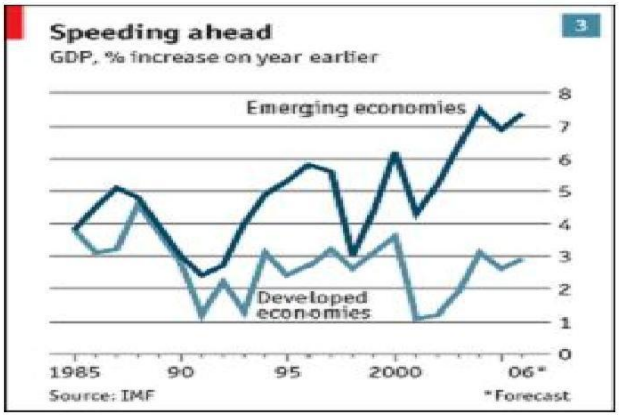
In 18th century the steam engine and the power loom gave Britain its industrial lead, today's Emerging economies dominated world output. Estimates by Angus Madison, an economic historian, suggest that in the 18 centuries up to 1820 these economies produced, on average, 80% of world GDP. But they were left behind by Europe's technological revolution and the first wave of globalization. By 1950 their share had fallen to 40%.Faster growth spreading more widely across the globe makes a huge difference to global growth rates. Since 2000, world GDP per head has grown by an average of 3.2% a year, thanks to the acceleration in emerging economies. That would beat the 2.9% annual growth during the golden age of 1950-73, when Europe and Japan were rebuilding their economies after the war; and it would certainly exceed growth during the industrial revolution. There is also more than one definition of emerging countries, depending on who does. Perhaps some of the defining (see these countries should be called re-emerging economies, because they are regaining their former eminence. The emerging economies, which were far behind from the developed economies in 1985, left behind them in 2005. It is expected that their share in the World GDP will exceeded about 25% of more than the developed economies. This fact has been highlighted in the Figure 2.



That growth, too, was driven by technological change and by an explosion in trade and capital flows, but by today's standards it was a glacial affair. Between 1870 and 1913 world GDP per head increased by an average of only 1.3% a year. This means that the first decade of the 21st century could see the fastest growth in average world income in the whole of history.

7.3 HIGH SPEED OF ECONOMIC GROWTH

It is pertinent to mention that emerging economies as a group have been growing faster than developed economies for several decades. So why are they now making so much more of a difference to the old rich world? The first reason is that the gap in growth rates between the developed and emerging economies has widened as is reflected in Figure 3.Their speed of growth is very fast and despite shocks affecting their growth but the growth trend is upward since 1985.



The Figure 3 reflects the downward trend of advanced economies, which touched the lowest growth of one percent in 1990s and 2000s.Their growth in 2008 and 2009 was almost negative. During last 25 years the growth of emerging economies never falls below 2.5 percent. It

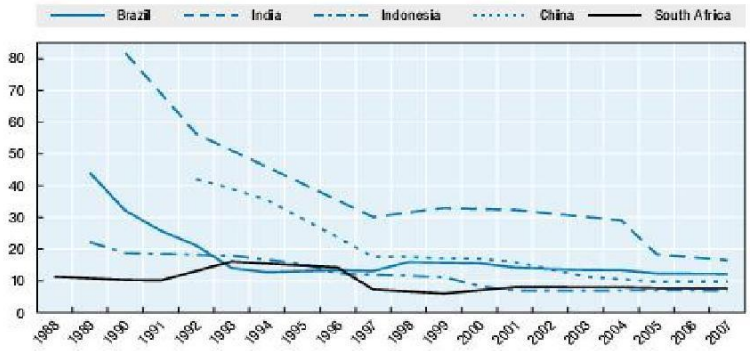
indicates the inherent economic potential of the emerging economies that enable them to grow with fast speed.

7.4 INTEGRATION WITH WORLD TRADING SYSTEM

Another important point to be noted is that the emerging economies have been integrated with global system of production resulting in accelerating trade and capital flows relative to GDP since 2000. Emerging economies are driving global growth and having a big impact on developed countries' inflation, interest rates, wages and profits. Particularly, the integration of China and other developing countries into the world trading system is causing the biggest shift in relative prices and incomes (of labor, capital, commodities, goods and assets), and this, in turn, is leading to a big redistribution of income. For example, whereas prices of the labor-intensive goods that China and others export are falling, prices of the goods they import, notably oil, are rising. In particular, the new ascendancy of the emerging economies has changed the relative returns to labor and capital. Because these economies' global integration has made labor more abundant, workers in developed countries have lost some of their bargaining power, which has put downward pressure on real wages. Workers' share of national income in those countries has fallen to its lowest level, whereas the share of profits has surged. It seems that Western workers are not getting their full share of the fruits of globalization.

The opening of the economies and reducing tariffs during 1980s and 1990s by the emerging economies have brought positive impact on their growth and balance of trade. The Figure 4 shows the tariffs cut from 80 percent to less than 10 percent by the emerging economies during last 20 years on account of Uruguay Round of trade talks and WTO.

Figure 4: Average applied import tariffs on non-agricultural products



Source: UN TRAINS (2008).

OECD analysis of trade and growth patterns in the E-7 emerging economies indicates that those countries and sectors that have opened the most enjoyed the largest growth spurts. Openness and trade performance are harder to assess in the area of services. Nevertheless, a range of indicators suggests that several E-7 economies have capitalized on opportunities offered by world services markets, though liberalization in this area has been arguably more selective and the

effects are more varied. India's recent impressive growth relied appreciably on the emergence of efficient international service providers, especially in the IT sector, but this sector was relatively young and thus unregulated. Trade and output in more regulated services sectors did not grow as fast. In Russia, there is a large potential for gains from services trade, particularly if it eventually accedes to the WTO and implements the associated commitments. Brazil has revealed a comparative advantage in services relative to China and Russia, but its services sector is not as specialized as India's and it lags behind the average world performance. Indonesia's services exports are on the rise, but the share of services in that country's exports is falling despite pockets of strong revealed comparative advantage in sectors such as communications and construction.

7.5 YOUNGER POPULATION

Kremer (1993) demonstrates that models of endogenous knowledge accumulation have important implications for human history over the very long run. He first notes that essentially all models of the endogenous growth of knowledge predict that technological progress is an increasing function of population size. The reasoning is simple: the larger the population, the more people there are to make discoveries, and thus the more rapidly knowledge accumulates. Romer (2001) says that the basic source of Kremer's prediction is the idea that the rate of increase in the stock of knowledge is increasing in population: innovations do not arrive exogenously, but are made by people.

This theory is applicable to China and India which are the two biggest populous countries of the world. Total population of both countries exceeds two billion people with majority younger ones.

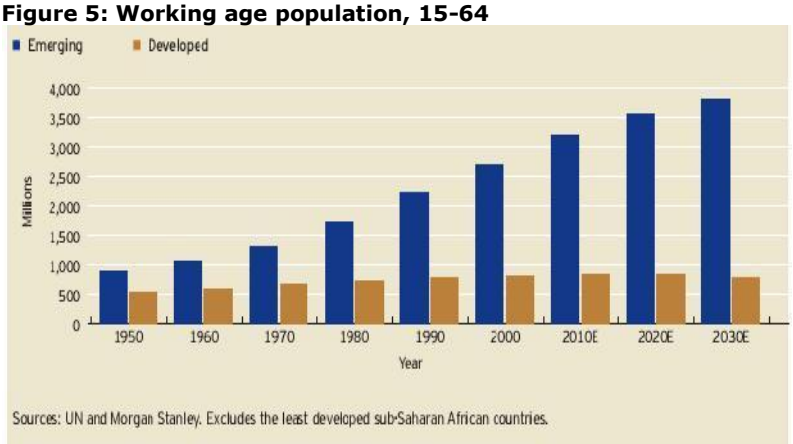
The huge population provides cheap labor and enhances their competitiveness. According to the People Bank of China, total labor force in 2008 was around 813.5 million out which 39.5% are working in agriculture, 27.2% in industry and 33.2% in services sector. The composition of Chinese GDP is of agriculture 10 %, industry 46.8% and services 42.6 percent. It means there is further scope of the expansion of industrial and services sectors as surplus labor still exists in agriculture sector. About 200 million populations have migrated from rural and urban areas for employment, indicating the expansion of employment opportunities. The same condition is prevailing in India where knowledge-based IT sector is rapidly expanding.

Thus demography is an important plus point of emerging economies. It is the main driving fore behind productivity growth. According to the EC, 61% of the world's population of 8 billion will be in Asia by 2025. The population of India will approach that of China by 2025. China's, according to current plans will have started to decrease by then. More than a third of the world's wealth will be based in Asia by 2025, compared to 20% now.

Thus, demography forms the first key selling point for emerging-market equities. Figure 5 on next page highlights the trends in the working-age population over the past 60 years, with estimates going out to 2030. While this segment of the population has essentially peaked in absolute terms in the developed world, the number of potential workers in emerging economies is projected to continue growing at a healthy pace

over the next few decades. This growth in the work force will present opportunities for creation of additional production capacity and further development of the middle class in emerging markets. It also means that in the world's most mature economies, wealth transfer payments to the aging component of the population may place a larger burden on growth than in emerging markets.

Figure 5: Working age population, 15-64



7.6 CAPITAL FORMATION

Emerging economies undertake some capital formation on their own, but in this era of globalization, they increasingly rely on foreign capital. Indeed, total capital flows to emerging economies have skyrocketed from $104 billion in 1980 to $472 billion in 2005. The foreign capital has the potential to deliver enormous benefits to developing nations. Besides helping bridge the gap between savings and investment in capital-scarce economies, capital often brings with it modern technology and encourages development of more mature financial sectors. Capital flows have proven effective in promoting growth and productivity in countries that have enough skilled workers and infrastructure. Some economists believe capital flows also help discipline governments' macroeconomic policies. Capital flows in three primary forms: portfolio equity investment, portfolio debt investment and foreign direct investment. In emerging economies, equity investments as a percentage of gross national income have been flat in recent years. Debt flows, however, have picked up since 2002 after plunging to zero in the previous two years. Meanwhile, FDI as a share of GDP has grown rapidly, becoming the largest source of capital moving from developed nations to developing ones.

From 1990 to 2005, emerging economies' share of total FDI inflows rose from 18 percent to 36 percent. In addition, the geographical composition of FDI flows has changed dramatically over the past four decades. Within emerging economies, Latin America's share of FDI has fallen from 52 percent in the 1970s to 33 percent since the 1990s. Asia's share of inflows has risen from 25 percent to 60 percent during the same period. Within Asia, China and India have gained FDI share relative to Southeast Asia. Today, these two emerging economic giants are the most

attractive markets for FDI. China's FDI shot up from $3.5 billion in 1990 to $60 billion in 2004, while India's rose from a paltry $236 million to $5.3 billion. The shift reflects the two nations' more open economic policies, as well as their sheer size and dynamic growth. The rush to invest in places like China and India suggests that FDI will continue to be an increasingly important source of development finance.

7.7 ACCUMMULATION OF FOREIGN EXCHANGE RESERVES.

Between 2000 and 2005, emerging market economies accumulated reserves at an annual rate of $250 billion (or 3.5% of their annual combined GDP). This was almost five times higher than the level seen in the early 1990s. As a ratio to GDP, such accumulation has been particularly rapid in China, Korea, India, Malaysia, Russia and Taiwan (China). In Latin America and central Europe, reserve accumulation has been fairly modest, rising as a percentage of GDP only in Argentina, the Czech Republic, Mexico and Venezuela over the past five years. Many oil-exporting Middle East economies have also seen a large increase in their reserves.

Table 1 on next page compares recent reserve accumulation across the major regions with two previous episodes in the early and mid-1990s. As the table shows, the recent scale of intervention scale of recent reserve accumulation has continued much longer than in the unprecedented earlier episodes.

Table 1: Balance of payment of Emerging Economies

	Current account balance			Net capital inflows[2]			Reserves			
							Change			Stock
	1990–93	1995–98	2000–05	1990–93	1995–98	2000–05	1990–93	1995–98	2000–05	Jul/2006[7]
Asia	6	–84	899	150	230	211	119	110	1,178	2,025
China	20	9	347	35	79	291	4	53	664	541
India	–17	–12	–5	20	16	95	7	0	99	156
Korea	–14	–32	82	20	41	51	5	8	136	225
Taiwan, China	39	16	117	–39	–21	30	10	–4	147	250
Other Asia[5]	–22	–45	358	114	115	–230	93	53	132	442
Latin America[4]	–85	–68	–26	138	105	106	71	49	83	244
Central Europe[6]	–2	–11	–102	6	34	134	16	21	39	89
Russia	1	18	230	9	–26	–31	10	7	167	243
Middle East[8]	–30	6	383	111	9	–302	–3	8	50	89
Total	–170	–119	1,445	423	351	117	214	195	1,517	2,701

[1] Cumulative sum for the period, in billions of US dollars. Aggregates are the sum of the economies. [2] Financial account, NIFs. [3] Hong Kong SAR, Indonesia, Malaysia, the Philippines, Singapore, Taiwan (China) and Thailand. [4] Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. [5] The Czech Republic, Hungary and Poland. [6] Kuwait, Libya, Oman, Qatar and Saudi Arabia. [7] Or latest available.

Sources: IMF, Balance of Payments Statistics; IMF, *World Economic Outlook*; Datastream. Table 1

7.8 LOW DEBT

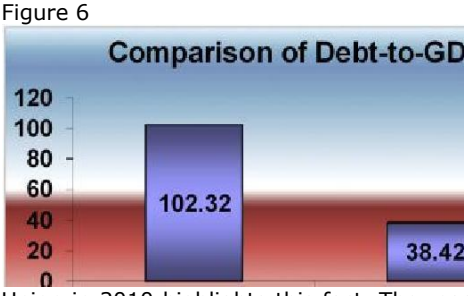
Lower levels of indebtedness compared with industrial countries should help them facilitate that transition, giving them room to finance expanding domestic demand and investment .Traditional patterns of indebtedness are being turned on their heads. Public debt in industrialized countries is over 90% of GDP, and it is projected to increase dramatically to almost 110% of GDP in the next five years, according to the International Monetary Fund. By contrast, in emerging markets, public debt is substantially lower at 38% of GDP and is projected to decrease to 34% over the same period of time. This will give them an edge over the advanced economies in expanding their investment, increasing capital stock, developing human capital and accelerate output.

8. COMPARISON OF G-7 AND E-7 AND ECONOMIES

8.1 RISING VS DECLING DEBT

The high volume of indebtness of the G-7 economies is a serious threat to the world economy. The financial crisis in the United States in 2008 and sovereign debt problem in the European

Figure 6



Union in 2010 highlights this fact. The reason is that G-7 economies are living beyond their means and excessively borrowing from international markets. The exports surplus generated particularly by China, Japan and Oil-exporting Arab countries are being absorbed by the official securities of the United States and European Union. The end result is that the debt is rising year after year and the accumulated debt has reached equal to their GDP in 2009 and will likely to touch 120 percent of GDP by 2014 as is shown in the Figure.6.

Jose Vinals, Director of IMF"s Monetary and Capital Market Department said in an interview released on June 17, 2011 in Sao Paulo, where the updates to the IMF's World Economic Outlook and Global Financial Stability Report were published, said that "the United States and debt-ridden European countries are playing with the fire unless they take immediate steps to reduced their budget deficits. They cannot afford to have a world economy where thee important decisions are postponed, because they are really playing with fire. The have now entered very clearly into a new phase of global crisis, which political in nature. In the United States, the political problem includes a fight over raising the legal ceiling on the nation' debt. A first-ever US default would roil markets and even a technical default would jeopardize the country's AAA rating".

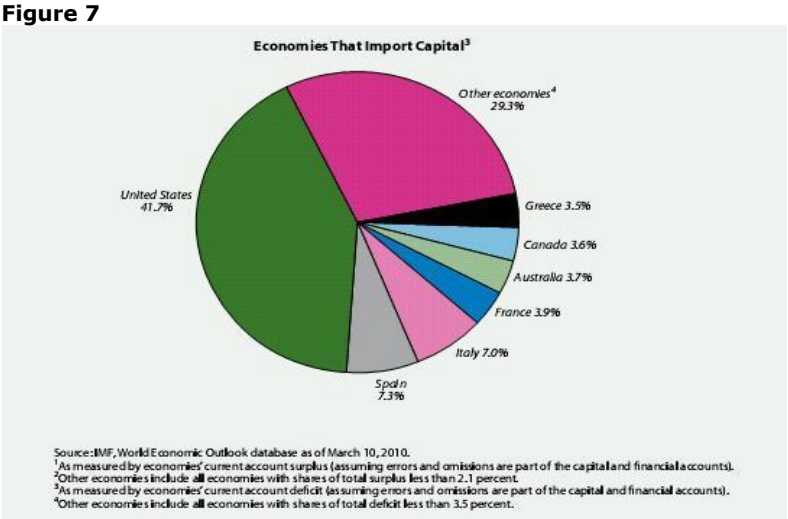
In contrast, the debt levels in the major emerging markets are projected to stay manageable. The debt of the leader of E-7 (China) economies is only around 16 percent of its GDP while the overall debt level of emerging economies is around 38 percent of their GDP, which is not too much. It is projected to be decreased to 30 percent by 2014 due to economic growth. High debt levels will likely to further slowdown economic growth in G- 7 industrialized countries.It is a fact that ass debt increases, so does interest expenses (and therefore the level of deficits), and as deficits increase, so does borrowing increases.! This is sometimes referred to as a vicious cycle - and is not reserved for over-leveraged consumers.

8.2 CAPITAL DEFICIT AND CAPITAL SURPLUS ECONOMIES

In the international trade, the countries producing surplus goods and services export them to those countries having shortage of these goods

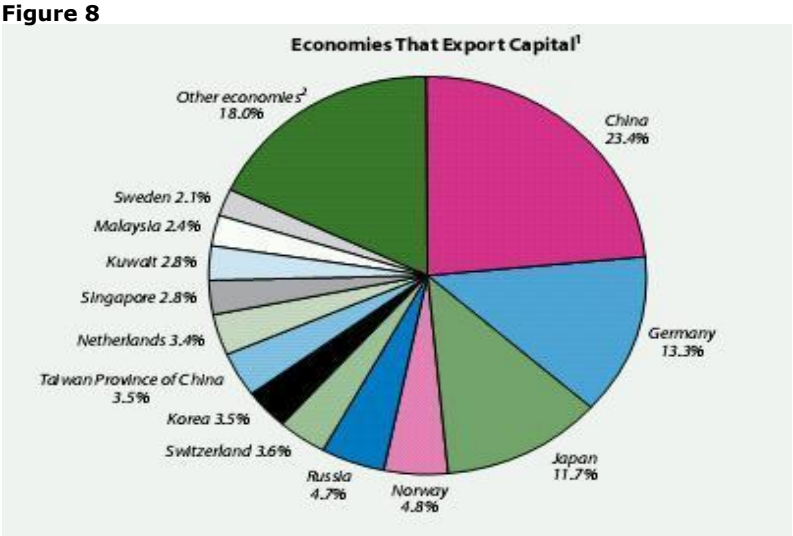
and in this way they generate trade surplus. In the same way, the countries having surplus capital exports it to deficit-capital countries. This phenomenon explains the fact how capital is moving from one country to another, which country has surplus capital and which country is capital-deficit. The following two Figures 7 and 8 taken from IMF's World Economic Outlook Report, March-2010 reveals that seven advanced economies import 70.7 percent of capital while other economies import only 29.3 percent of capital. The United States, Spain and Italy are three major importers of capital with their share 41.7%, 7.3% and 7.0% percent respectively. Interestingly, these are three major indebted economies in advanced countries.

Figure 7



In contrast, among the net exporters of capital, China is the number one with 23.4 percent, Germany is second with 13.3% and Japan is third with 11.7 percent. Out of 13 net exporters of capital with total share of 82 percent in the export of capital, five countries such as Germany, Norway, Switzerland, Sweden, Netherlands belongs to western hemisphere and their collective share in capital export is 26.4 percent. While the rest of 8 countries belong to Asian continent and they include China, Japan, Russia, South Korea, Kuwait, Singapore, Malaysia and Taiwan and their total net share in capital export is 54.8 percent. If we exclude Japan, which is a member of G-7, the share of the rest of Asian economies in net capital export is around 42.1 percent.

Figure 8



Source: IMF World Economic Outlook,March 2010.

This small detail highlights the fact which areas are capital-deficit and which are capital surplus. As capital surplus area is Asia the future growth is expected to rise in Asia rather than Europe or the United States. It indicates the shifting of economic power centre from western countries to Asian emerging economies (China and India).

8.3 HIGHEST VS LOW RETURN ECONOMIES

Greater economic dynamism will in turn lead to more attractive investment opportunities and an increasing flow of funds from industrialized country investors that have historically been domestically focused. Home bias will fade because institutional investors, particularly pension funds, will likely find it difficult to meet their return objectives without tapping into the range of investment options in the emerging world. Emerging markets like China, Brazil, India, Mexico, Korea and Indonesia, Turkey and Pakistan are very attractive from their return and strong economic fundamentals. The difference in terms structure of interest between advanced and emerging economies is another factor contributing the flow of capital from advanced economies to the emerging economies.. The rate of return on investment is higher in emerging economies as compared with the advanced economies. This can be noted from the Table 3.

Table 3 Comparison of Banks Return on Equity (%)

G-7 COUNTRIES	2004	2005	2006	2007	2008	2009
1. United States	13.2	12.4	12.3	7.8	0.4	0.9
2. United Kingdom	10.9	11.8	8.9	6.2	-10.3	-2.0
3. Japan	4.1	11.3	8.5	6.1	-6.9	4.9
4. Germany.	4.2	13.0	9.4	6.6	-7.7	.....
5. Italy	9.3	9.7	14.3	12.8	4.8	.....
6. France	10.6	11.8	14.0	9.8	-1.0	-----
7.Canada	19.5	17.1	21.8	20.1	9.8	9.0
Average	10.08	11.01	11.6	9.9	-1.5	3.3
E-7 COUNTRIES (EMERGING ECONOMIES)						
1. China	13.7	15.1	14.9	16.7	17.1	------
2. India	20.8	13.3	12.2	13.2	12.5	12.5
3. Brazil	22.1	29.5	27.3	28.8	15.3	13.0
4. Indonesia	22.8	16.7	16.2	17.8	13.4	35.9
5. Turkey	14.0	10.9	19.1	19.6	15.5	18.8
6. Pakistan	20.3	25.8	23.8	15.4	7.8	8.6
7. Russia	20.3	24.2	26.3	22.7	13.3	4.9
Average	15.88	19.35	19.97	19.17	13.55	15.61

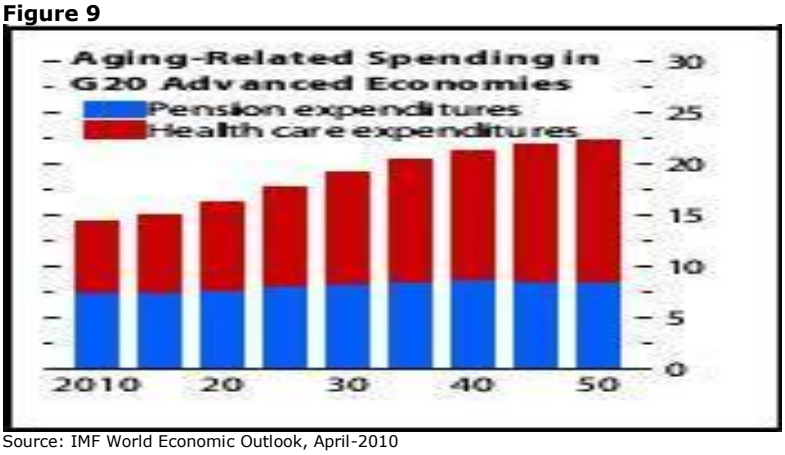
Source: The data was collected from IMF Financial Stability Report, April, 2010.

Table 2 shows maximum return on investment in the G-7 advanced economies during 2004-2009 was 10.08 while minimum return was negative 1.5 percent in 2008.In contrast, in the emerging economies the maximum return on investment was 19.97 percent in 2006 while minimum return was 13.55 in 2008. It is pertinent to note that the emerging economies offered highest return of 13.55 percent in 2008 (vis-à-vis minus 1.5 percent in advanced economies) when the whole world was in the grip of financial crisis. Moreover, there is no negative return on investment in any year from 2004 to 2009. The highest return has attracted foreign investors to invest their money in the emerging economies.

8.4 AGING VS YOUNGER GENERATION

As we have mentioned above the population of G-7 advanced economies are ageing and this factor is one of the main cause of productivity slowdown. Hagemann and Nicoletti (1988) have mentioned that population under 15 was 21.8 percent in the G-7 economies in 1980 which has declined to 14.2 percent in 2010. The population over 66 years age in G-7 countries was 12.52 percent in 1980, which has increased to 15.5 percent in 2010. The percentage of old population in the United States and UK in 2010 was 12.6 and 14.5 percent respectively. The overall age dependency ratio in these countries is estimated to be 24.17 percent in 2010. The Figure 9 shows aging-related spending in G-20 advanced economies. It indicates that pension and healthcare spending in 2010 were about 15 percent the budget advanced economies and they may increase of about 23 percent in 2050.

Figure 9



Source: IMF World Economic Outlook, April-2010

It is estimated that working age population (15-64) year are around 500 million in the developed economies as compared to 3000 million in the emerging economies. It means that the ratio of this population is five times more in the emerging economies vis-à-vis advanced economies.

9. CHALLENGES TO EMERGING ECONOMIES

There are many serious challenges ahead for emerging economies to face. Some of them are stated as under:-

1. Low per capita income and high level of poverty are the two main problems of the emerging economies. As the population growth rate is high it eats away the whole economic growth. In order to check population growth rate the emerging economies will have to follow China's one child policy and severe penalties like loss of job.
2. Income inequality is another problem of the emerging economies. As the income is rising rapidly due to expansion of exports of goods and services the wealth is concentrating into the exporting sector. This concentration can be reduced through taxation.
3. In the emerging economies, more than 40% population is still engaged in agriculture, which is a subsistence sector. Policy initiatives must be taken to shift surplus labor from agriculture to industrial and services sector. This can be done through fiscal incentives. It will not only accelerate the pace of industrial growth and raise the level of the income of migrants. It will also help make the agriculture sector more efficient and increase output.
4. In emerging economies, as population is moving from rural to urban areas for employment in industrial sector, which is mainly located in urban areas, it has created multi-dimensional socio-economic problems. The governments of emerging economies will have to build new houses, provide healthcare, education, transport and other facilities to accommodate the migrants and spend a substantial portion of their budget on infrastructure. For this purpose, these governments need sufficient resources that can be generated by levying taxes on high income sector.

5. As the level of literacy and education is low in the emerging economies one can question the quality of human capital. The quality of human capital can be improved through education, training and learning by doing. The emerging economies will have to provide these facilities to improve their level of human capital, otherwise, they will not be able to maintain their competitiveness and improve their growth productivity.

10. FINDINGS AND CONCLUSIONS

In this study we have taken a sample of 14 countries, seven advanced and seven emerging economics. Among seven advanced countries we have included the members of G-7 countries such as USA, Japan, UK, Canada, Germany, France, Italy while we have selected seven emerging economies such as China, India, Indonesia, Brazil, Russia, Pakistan and Turkey.

We have first analyzed the advanced economies in the light of existing financial crisis and their debt problem. We have investigated into the puzzle of growth productivity slow down in the G-7 countries and its inherent causes. We have also looked into the aging population of advanced countries and growing burden of healthcare and social security and its impact on financial health in future. We have also analyzed the role of immigrants in the growth of advanced economies before 9/11/2001, which has lessened to much an extent since that:

We have analyzed of robust economic growth of the emerging economies particularly in a scenario when the G-7 economies are facing economics downturns. We have described different characteristics of the emerging economies, which are playing a vital role in their fast growth. Then we compare the advanced economies of G-7 with the emerging of E-7. This comparison helps us draw the following conclusions:

1. The G-7 economies of advanced countries have a large stock of debt, which may further dampen their growth in future. In contrast the stock of debt of emerging economies is relatively moderate and affordable.
2. The continuous budget deficit of the most of G-7 countries indicates that the are living beyond their means and spending more than they are earning. The reason of continuous budget deficit is that the scope of further taxation in these economies is not promising because tax rates are already higher. Most of tax burden is being borned by middle class while the wealthy class is enjoying many tax benefits and is so much powerful to influence the policies. In such a situation the governments of the most G-7 countries are borrowing from internal and external sources rather than generating revenue through taxation
3. The population of G-7 advanced economies is aging because of low population growth rate. HageMann and Nicoletti (1988) have mentioned that population under 15 was 21.8 in the G-7 economies in 1980 which has declined to 14.2% in 2010. The population over 66 year's age in G-7 countries was 12.52% in 1980 which has increased to 15.5% in 2010. The percentage of old population in the USA and UK in 2010 was 12.6% and 14.5% respectively. The overall age dependency ratio in these countries estimated to be

24.17% in 2010. It indicates the pension and health care spending in 2010, which is about 15% of the budget in advanced economies, may increase to about 23% in 2050.

4. In past, the immigrants coming from different parts of world into these economies played vital role in their population growth rate and labor force participation. Since 2001 the G-7 countries have tightened their immigration laws and deported thousands of foreign illegal immigrants, who were working in different industries and business firms under very low wages vis-à-vis local workers. Now this cheap labor will no more be available to G-7 countries. This factor will also likely to affect the G-7 economies negatively.
5. In contrast, the emerging economies of E-7 possess abundant resources of young labor force, which is the main contributing factor in their fast economic growth. This young labor force will continue to grow even in future due to relative high population growth rate.
6. The emerging economies have substantially accumulated foreign exchange reserves as well capital stock. This process is continued. They are also increasing their spending on education to improve the quality of human capital as well as their spending on research and development (R&D) to augment their efficiency of output. It will help them transform their economies form efficiency driven to innovations-driven economies in future.
7. The emerging economies of E-7 also have many challenges like low per capita GDP, high population growth rates, high level of poverty, low level of social indicators, low level of high-tech capital sock, scientific institutions and financial depth. These factors may create impediment in the way of their fast economic growth. Thus, they must pay attention to improve these indicators to sustain their economic growth.

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Corporate Governance: Impact on Internal Control in selected commercial Banks in Bangladesh

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ABSTRACT
Corporate Governance is a widely discussed issue in the current management literature. The concept of corporate Governance is a relatively new challenge that has evolved over the last few decades. After the recognition of the concept of Corporate Governance in businesses the right to be informed of those various groups has been established whose interest is affected by the activities of a business organization. A shareholder who has invested his fund in a company has right to know, how efficiently the fund is being used likewise employees, customers, proximate community, government and society in general have right to be informed how efficiently the company is dealing with their respective interests. On the basis of such information, they may decide to what extent they should support the activities of the companies where they are investing their valuable resources and efforts.
There are various forms of business, but corporate form of business (i.e. company) is playing a dominant role in the business sector. In corporate form of business shareholders nominate or elect a Board of Directors for governing their business. The Board of Directors is accountable to the shareholders for their activities and the accountability of these activities is treated as Corporate Governance. It can be defined as an organizational control device, which is a hybrid of internal and external control mechanism with a view' to achieving efficient utilization of corporate resources. So, proper application of Corporate Governance norms can accelerate effectiveness and transparency in the functioning of a company.

JEL Classification Code: G30, G32, M42

Introduction

Corporate governance is the set of processes, customs, policies, laws, and institutions affecting the way a corporation (or company) is directed, administered or controlled. Corporate governance also includes the relationships among the many stakeholders involved and the goals for which the corporation is governed. In contemporary business corporations, the main external stakeholder groups are shareholders, debtholders, trade creditors, suppliers, customers and communities

affected by the corporations activities. Internal stakeholders are the board of directors, executives, and other employees. Corporate governance is a multi-faceted subject. An important theme of corporate governance is the nature and extent of accountability of particular individuals in the organization, and mechanisms that try to reduce or eliminate the principal-agent problem. A related but separate thread of discussions focuses on the impact of a corporate governance system on economic efficiency, with a strong emphasis on shareholders' welfare; this aspect is particularly present in contemporary public debates and developments in regulatory policy.[1]

There has been renewed interest in the corporate governance practices of modern corporations since 2001, particularly due to the high-profile collapses of a number of large corporations, most of which involved accounting fraud. In the U.S., these include Enron Corporation and MCI Inc. (formerly WorldCom). Their demise is associated with the U.S. federal government passing the Sarbanes-Oxley Act in 2002, intending to restore public confidence in corporate governance. Comparable failures in Australia (HIH, One.Tel) are associated with the eventual passage of the CLERP 9 reforms. Similar corporate failures in other countries associated stimulated increased regulatory interest (e.g., Parmalat in Italy). Corporate scandals of various forms have maintained public and political interest in the regulation of corporate governance. It is common to suggest that corporate governance lacks definition. As a subject, corporate governance is the set of processes, customs, policies, laws, and institutions affecting the way a corporation is directed, administered or controlled. Corporate governance also includes the relationships among the many stakeholders involved and the goals for which the corporation is governed.

Many of the "definitions" of corporate governance are merely descriptions of practices or preferred orientations. For example, many authors describe corporate governance in terms of a system of structuring, operating and controlling a company with a view to achieving long term strategic goals to satisfy shareholders, creditors, employees, customers and suppliers, and complying with the legal and regulatory requirements, apart from meeting environmental and local community needs. However, there is substantial interest in how external systems and institutions, including markets, influence corporate governance. There is a popular tendency to view shareholders as the owners of public corporations which affects some "definitions" of corporate governance. For example, the report of India's SEBI Committee on Corporate Governance defines corporate governance as the "acceptance by management of the inalienable rights of shareholders as the true owners of the corporation and of their own role as trustees on behalf of the shareholders. It is about commitment to values, about ethical business conduct and about making a distinction between personal & corporate funds in the management of a company." It has been suggested that the Indian approach is drawn from the Gandhian principle of trusteeship and the Directive Principles of the Indian Constitution, but this conceptualization of corporate objectives is also prevalent in Anglo-American and most other jurisdictions.

The concept of shareholders as owners of a publicly-traded corporation is complex. Ownership applies to property rights, which leads to some ambiguity in relation to a corporation where shareholders unambiguously own shares but do not normally exercise ownership rights of the assets of corporation. This distinction is fundamental to the legal person concept that defines the existence of corporations.[2] Objectives of the Study:

The study has been conducted for fulfillment of the following objectives:

1. To find out the major characteristics of Corporate Governance activities of commercial banks in Bangladesh;
2. To assess the disclosure of such activities in their annual report;
3. To suggest for better disclosure of Corporate Governance in their annual report.

Justification of the Study

As service industry, commercial banks play a vital role in the economy of Bangladesh. This is the most profitable and developed sector in Bangladesh. And it is the largest white-collar intensive employment sector of the country. It is also one of the highest contributors to the National Exchequer, as it deals with money, which is deposited by the people of the country, so good governance is to be ensured in this sector.

From the review of literature, it is revealed that some studies have been conducted on 'Corporate Governance issues like audit committee disclosure, disclosure on BOD, financial reporting principles, problems and guidelines of Corporate Governance in Bangladesh. A few works are also going on some other sectors, and aspects of Corporate Governance in Bangladesh. None of the studies addressed the Impact of Corporate Governance on Internal Control issues of the commercial banks in Bangladesh. This is why it is not possible to get a total picture of the game from those. Moreover, analysis of perception of the corporate stakeholders and evaluation of Corporate Governance practices with suggested norms based on primary data have been taken into account in the present study. Recently, the news media and the interest of general public in the activities of the commercial banks have made a good ground for conducting a study on them. Considering the relevance and significance of the topic, the study has striven for fulfilling some of the above gaps.

Review of related literature

Md. Abdur Rouf[3] and others had a study on "Good corporate Governance principles and Recommendations for Good Practices". This study summarizes overall good corporate governance principles and recommendations for good practices to all organizations (whether public, private or non-profit) in Bangladesh. These good practices are divided into two categories (i) structure of the board of directors and (ii) operation of the board of directors. The basic Governance principles related to the effectiveness and accountability of board of directors. We argue that good corporate governance principles can make stronger intra-company control and reduce opportunistic behaviors and lower the asymmetry of information, so it will be a positive impact on an

organization. Although the study is addressed primarily to Bangladesh based organizations, the general principles are applicable to foreign entities as well, although modifications must be made to description for legal and cultural differences.

Ahmad [4], attempts to investigate the relationship between corporate governance and Triple- Bottom Line (TBL) scenario from the stakeholder perspective. Malaysia is selected as a representative of developing countries due to its specific economic traits, its position as a pioneer of corporate governance code in developing countries and its common features of code with the UK Combined Code. Firms are classified into top 50 and bottom 50 of the corporate governance ratings list taken from Malaysian Corporate Governance Rating Index (MCGRI) to examine whether there are any differences in the stakeholders value-added of firms in both classified samples. Each of the stakeholder added values consists of the three bottom lines: economic, social and environment taken from the Global Reporting Initiatives (GRI), 2002 guidelines. The result shows that supplier and employee added value have a significant influence on corporate governance ratings, but not so for customer, investor and public added value. This study analyses only information that can be captured from the Annual Report (AR) and ignore any TBL activities carried out beyond the AR. It is hoped that the values found from the analysis will be able to provide additional information concerning corporate governance and TBL to interested parties. The criteria of TBL revealed may be found to be essential elements in the development of effective and efficient sustainability ratings in Malaysia and other developing countries. Finally, the result could also serve as a benchmark to help poor governance companies improve their sustainability practice. This study bridges the gap of previous studies by using a combination of stakeholders and TBL on the analysis, directly identifies firms with certain scores of corporate governance and addresses issues related to these exceptional companies.

Houqe et al [5] in their paper investigate whether firm corporate' governance practices have an effect on the quality of its publicly released financial information. Using a sample of 648 firm-years for the period of 2000—2006, the result suggests that corporate governance has a significant impact on earnings quality. With little exception, governance variables and control variables appear to have significant effects on earnings quality. These results imply that despite significant governance differences between Bangladesh and developed market economies, there are strong similarities in internal governance. This will allow capital market regulator like the Securities and Exchange Commission (SEC) to design mechanisms that will limit managers' earnings management practices. This, in turn, will contribute towards developing an efficient stock market by protecting investors' rights.

Ahmed [6] in his study identifies that the financial sector reform is a continuous process. It comprises policy reforms and basic institutional changes in the status and their respective goals. The speed and pace of changes in both ways depend on the socio-political demand of the economy as well as to meet the needs of changed market situation. The researcher also mentions that the financial reform process in our economy started since early 1980s with privatization of Nationalized

Commercial Bank and allowing private sector banks and major changes have been brought about in policy areas with our own initiative and also under the surveillance and supervisory guidance of International Monetary Fund and World Bank. The researcher suggested that the "reform measures" should be country specific tailored to the socio-economic needs; simultaneous integrated approach should be taken to redress the economic ills and derive benefit from the globalization and free market approach. Lastly, he concluded that the scattered, uncommitted and half hearted reforms are fraught with risk of destabilizing the economy.

Haque et al. [7] focused on the state of Corporate Governance (CG) in three sectors of the economy: the private company (public-listed company), the financial enterprises, and the State Owned Enterprises (SOEs). To understand the state of CG, three broad aspects of governance and management issues were studied. These are: a) shareholders' rights, b) public disclosure of information, c) effectiveness of the Board. Within these many sub-categories were studied which were discussed in this paper. The study used interviews with key stakeholders, experts and executives of these types of companies, a questionnaire survey and also group discussions. In terms of the three sectors, this study found that public-listed companies are more open to their shareholders with respect to shareholders rights and disclosures of information. With regards to public disclosure of information and transparency, companies use "box checking" method rather than understanding the spirit of the disclosure. On the issue of the active participations of the independent directors SOEs had a better rating than others. In public limited companies study found that in 40% of the cases independent directors rarely disapproved the agenda placed in the board. In the best practice guidelines of CG three major committees are recommended, study found other than SOE, financial and non-financial institutions are not complying with the best practices.

Ahmed and Yusuf [8] in their article provide a conceptual framework of corporate governance along with analysis of corporate governance scenario in Bangladesh. Various factors including poor legal enforcement, discretionary powers of the top corporate management, overriding regulatory provisions, lack of standard practice in financial reporting and auditing, and absence of strong pressure groups have caused the weak corporate governance in Bangladesh. The paper suggests some policy recommendations to improve and assure good corporate governance in Bangladesh. These are:

- The Securities and Exchange Commission (SEC) of Bangladesh need to be strengthened so that it can devise and enforce a code for good corporate governance;
- The Companies Act has to be amended and update to have consistency with Bangladesh Accounting Standard (BAS), SEC requirements and the Bank Companies Act;
- Independent Audit Committee should be made compulsory for all listed companies. Strict implementation of accounting and auditing standards are very important;

- Quality of financial reporting need to be improved. This requires a robust regulatory regime and effective enforcement of the accounting and auditing standards;
- Disclosure should be in line with IASs / IFRSs; and there must be a consolidating financial report for the group of companies.

Farooque et al.[9] investigate empirically the effect of board ownership on firm performance in Bangladesh. By estimating single equation and simultaneous equation models on an unbalanced pooled sample of listed firms, it offers some new insight into the ownership performance link in Bangladesh. Building on extant literature, it examines the ownership performance relationship in an emerging market economy considering ownership as exogenous and as endogenous. The latter approach is favored as recent empirical evidence shows that ownership and performance are endogenously determined and there is either a reverse-way or two-way causality relationship between the two. While OLS regression analysis indicates a linear and non-linear relationship between board ownership and performance, this disappears when 2-SLS estimation of a simultaneous equation model is carried out. Instead, a reverse causality relationship emerges. Other governance and control variables appear to have effects consistent with the literature. These results suggest a need to strengthen the internal control mechanisms within listed firms in Bangladesh.

Wise and Au [10] in their paper determining the nature and extent of corporate social responsibility reporting in the banking sector in Bangladesh, and to assess the need to improve corporate social responsibility by such firms. Corporate social responsibility is associated with corporate governance and ethical business procedure. Good corporate governance is expected to underpin effective and efficient corporate social responsibility within firms. They observe, from their content analysis of the annual reports of three cases studies within the Bangladesh banking industry, that the corporate social responsibility disclosures focus on initiatives undertaken to support two critical two sectors within Bangladesh's economy: agriculture and the SME sector. Further disclosures address contributions and donations made by the banks to support underprivileged sections of Bangladesh society including destitute youth and women. Of the three cases examined in this study, two are relatively new entrants to the banking sector. They observed that the newest firm, incorporated in 1999, made no disclosures in regards to its corporate social responsibility and, as a consequence, conclude that the corporate governance mechanisms in this firm are likely to be unsophisticated.

Ahmed et al.[11] in their paper argue 8 corporate governance — a concept referring to the ideal mode of ensuring firm's accountability to its stakeholders, has ascended to its current level of importance owing to corporate level scandals in the large economies of the world; experience gained from which has brought some positive changes in the less developed economies — changes that are proactive and are aimed at enhancing corporate responsibility and performance. The objective of this study has been to review this concept as is being practiced, the problems being faced, the schools of thought, its implication on firm valuation and performance and lastly, to see its relevance in the context

of Bangladesh, where the listed firms are mostly owned and managed by family members. Suggestions to improve corporate governance and accountability, also in line with SEC guidelines, are to have an active board with well proportioned executive vs. non-executive members, along with representatives from all groups of shareholders/stakeholders; separation of the role of CEO and the chairperson; creation of board committees; changing audit firms periodically etc, to name a few.

Bhattarcharjee[12] in his article highlights the crucial need of building up a strong financial structure, a sufficient legal framework for enforcing lenders resources on borrowers, effective supervisory and regulatory role of the central bank through formulation of broad-based prudential guidelines, commercial autonomy of bank management and institution of a credible and transparent accounting base.9 The researcher points out the following reform issues should give emphasis on Development Financial Institutes (DFIs) and Private Commercial Banks (PCBs); autonomy of Bangladesh Bank (BB); role of Ministry of Finance should be reduced; the scheduled banks should be put fully under the regulatory oversight of BB; members of political parties and defaulters should be prohibited from the Board of Directors of the banks; government should liquidate all its dues to the Nationalized Commercial Banks (NCBs); legal reform should be make effective; International Standard based audit of the loan portfolio; asset liabilities and capital adequacy should be introduced for proper disclosure of the banks; number of trade unions should be reduced; integrated computerization and up gradation of professional skills of officials should be taken up to a priority basis.

Sarkar et al.[13] discuss the response rate of different companies (industry-wise) to the Securities and Exchange Commission (SEC) Corporate Governance (CG) guidelines and the compliance rate for corporate governance guidelines by the companies who have reported the compliance with such guidelines in 2005-2006 and 2006.10 The study has been followed by some recommendations to develop the best practices for corporate governance in Bangladesh. These are:

- Companies should follow the corporate governance guidelines on 'Comply or explain basis properly and explain the reasons for non-compliance;
- All listed public limited companies should form an independent Audit Committee to fulfill the essential feature of good corporate governance;
- Board of Directors in Bangladesh creates family monarchy in the company. This is tried to be eliminated or reduced to a great extent by incorporating more independent directors in the board;
- The SEC can properly examine the annual reports, interim reports and other reports submitted by the companies as a part of the effective monitoring system;
- The SEC should upgrade its existing guidelines and extend its scope by including some other corporate governance issues like corporate social reporting, ethical issues, and evaluation of board's performance and so on;
- The SEC has to be empowered to undertake any action for violation of any compliance guidelines by the companies; and

- The SEC stipulates that the audit committee should be comprised of three directors, one of which should be independent.

BEI[14] engaged on a project to examine the current state of corporate governance norms and practices in Bangladesh, India, Sri Lanka and Pakistan. The publication is the product of the first stage of the project, which comprised of four reports on the state of corporate governance of those countries. The focus of the reports is a comparison of current norms and practices against the OECD principles on corporate governance, and to identify reforms and initiatives that could help strengthen corporate governance in Bangladesh. This publication also highlights that Bangladesh can find corporate governance regimes that contain the necessary transparency and accountability, which is relevant to the cultural, economic and historical environment of the region, by looking to its South Asian neighbors. It is suggested in the publication that corporate governance may create an environment in the private sector where corporate transparency and accountability can protect investors and stakeholders that Bangladesh will be able to develop competitive private industries and attract more foreign and domestic investment.

Methodology of the Study

The study covers four commercial Banks like Janata Bank Ltd., Agrani Bank, Sonali Bank Ltd. and EXIM Bank. These are selected on the basis of convenience in data collection. The study is based heavily on secondary data available in annual reports of the selected commercial banks.

Major Findings

Parties to corporate governance

The most influential parties involved in corporate governance include government agencies and authorities, stock exchanges, management(including the board of directors and its chair, the Chief Executive Officer or the equivalent, other executives and line management, shareholders and auditors). Other influential stakeholders may include lenders, suppliers, employees, creditors, customers and the community at large. The agency view of the corporation posits that the shareholder forgoes decision rights (control) and entrusts the manager to act in the shareholders' best (joint) interests. Partly as a result of this separation between the two investors and managers, corporate governance mechanisms include a system of controls intended to help align managers' incentives with those of shareholders. Agency concerns (risk) are necessarily lower for a controlling shareholder. A board of directors is expected to play a key role in corporate governance. The board has the responsibility of endorsing the organization's strategy, developing directional policy, appointing, supervising and remunerating senior executives, and ensuring accountability of the organization to its investors and authorities. All parties to corporate governance have an interest, whether direct or indirect, in the financial performance of the corporation. Directors, workers and management receive salaries, benefits and reputation, while investors expect to receive financial returns. For lenders, it is specified interest payments, while returns to

equity investors arise from dividend distributions or capital gains on their stock. Customers are concerned with the certainty of the provision of goods and services of an appropriate quality; suppliers are concerned with compensation for their goods or services, and possible continued trading relationships. These parties provide value to the corporation in the form of financial, physical, human and other forms of capital. Many parties may also be concerned with corporate social performance.

A key factor in a party's decision to participate in or engage with a corporation is their confidence that the corporation will deliver the party's expected outcomes. When categories of parties (stakeholders) do not have sufficient confidence that a corporation is being controlled and directed in a manner consistent with their desired outcomes, they are less likely to engage with the corporation. When this becomes an endemic system feature, the loss of confidence and participation in markets may affect many other stakeholders, and increases the likelihood of political action.

Ownership structures and elements

Ownership structure refers to the types and composition of shareholders in a corporation. Researchers often "measure" ownership structures by using some observable measures of ownership concentration or the extent of inside ownership. Some features or types of ownership structure involving corporate groups include pyramids, cross-shareholdings, rings, and webs. German "concerns" (Konzern) is legally recognized corporate groups with complex structures. Japanese keiretsu and South Korean chaebol (which tend to be family-controlled) are corporate groups which consist of complex interlocking business relationships and shareholdings. Cross-shareholding is an essential feature of keiretsu and chaebol groups). Corporate engagement with shareholders and other stakeholders can differ substantially across different ownership structures.

Basic principles of corporate governance

- **Rights and equitable treatment of shareholders**: Organizations should respect the rights of shareholders and help shareholders to exercise those rights. They can help shareholders exercise their rights by effectively communicating information that is understandable and accessible and encouraging shareholders to participate in general meetings.
- **Interests of other stakeholders**: Organizations should recognize that they have legal and other obligations to all legitimate stakeholders.
- **Role and responsibilities of the board**: The board needs a range of skills and understanding to be able to deal with various business issues and have the ability to review and challenge management performance. It needs to be of sufficient size and have an appropriate level of commitment to fulfill its responsibilities and duties. There are issues about the appropriate mix of executive and non-executive directors.
- **Integrity and ethical behavior**: Ethical and responsible decision making is not only important for public relations, but it is also a necessary element in risk management and avoiding lawsuits. Organizations should develop a code of conduct for their directors

and executives that promotes ethical and responsible decision making. It is important to understand, though, that reliance by a company on the integrity and ethics of individuals is bound to eventual failure. Because of this, many organizations establish Compliance and Ethics Programs to minimize the risk that the firm steps outside of ethical and legal boundaries.

- **Disclosure and transparency**: Organizations should clarify and make publicly known the roles and responsibilities of board and management to provide shareholders with a level of accountability. They should also implement procedures to independently verify and safeguard the integrity of the company's financial reporting. Disclosure of material matters concerning the organization should be timely and balanced to ensure that all investors have access to clear, factual information.

Impact of Corporate Governance

Corporate governance mechanisms and controls are designed to reduce the inefficiencies that arise from moral hazard and adverse selection. For example, to monitor managers' behavior, an independent third party (the external auditor) attests the accuracy of information provided by management to investors. An ideal control system should regulate both motivation and ability.

Internal corporate governance controls

Internal corporate governance controls monitor activities and then take corrective action to accomplish organisational goals. The activities are stated below:

- **Monitoring by the Board of Directors**: The board of directors, with its legal authority to hire, fire and compensate top management, safeguards invested capital. Regular board meetings allow potential problems to be identified, discussed and avoided. Whilst non-executive directors are thought to be more independent, they may not always result in more effective corporate governance and may not increase performance. Different board structures are optimal for different firms. Moreover, the ability of the board to monitor the firm's executives is a function of its access to information. Executive directors possess superior knowledge of the decision-making process and therefore evaluate top management on the basis of the quality of its decisions that lead to financial performance outcomes. It could be argued, therefore, that executive directors look beyond the financial criteria.
- **Internal control procedures and internal auditors**: Internal control procedures are policies implemented by an entity's board of directors, audit committee, management, and other personnel to provide reasonable assurance of the entity achieving its objectives related to reliable financial reporting, operating efficiency, and compliance with laws and regulations. Internal auditors are personnel within an organization who test the design and implementation of the entity's internal control procedures and the reliability of its financial reporting.
- **Balance of power**: The simplest balance of power is very common; require that the President be a different person from the Treasurer. This application of separation of power is further

developed in companies where separate divisions check and balance each other's actions. One group may propose company-wide administrative changes, another group review and can veto the changes, and a third group check that the interests of people (customers, shareholders, employees) outside the three groups are being met.

- **Remuneration**: Performance-based remuneration is designed to relate some proportion of salary to individual performance. It may be in the form of cash or non-cash payments such as shares and share options, superannuation or other benefits. Such incentive schemes, however, are reactive in the sense that they provide no mechanism for preventing mistakes or opportunistic behavior, and can elicit myopic behavior.

External corporate governance controls

External corporate governance controls encompass the controls external stakeholders exercise over the organization. These include:

- competition
- debt covenants
- demand for and assessment of performance information (especially financial statements)
- government regulations
- managerial labour market
- media pressure

Janata Bank's corporate governance philosophy is woven around its total commitment to ethical practices in the conduct of its business, while striving to enhance shareholders' value. The interrelation between the Board, the executives and other functionaries is so configured as to have distinctly demarcated roles and improved corporate performance. The Bank is also committed to the following high disclosure standards and transparency. In line with the best practices, the Bank has formed various committees of the Board to monitor every aspect of business.

The Board and the management have been relentless in their efforts to ensure meaningful corporate governance in the matter of credit administration, financial management, internal audit and control of wasteful expenditures. The Bank adopted the following strategies and techniques to ensure the application of corporate governance in attaining its objectives with efficiency and transparency. The following are in place in order to ensure corporate good governance.

1. A well structured organogram assigning duties and responsibilities of the respective department.
2. An appropriate structure for the Board, Executive and Audit Committees:
   i) Strong internal control system in relation to lending, administrative, financial and other operational matters.
   ii) An appropriate financial reporting under International Accounting System (IAS) and International Financial Reporting System (IFRS).

Effective internal and external information flows

I Policy-based appointment, promotion, transfer and performance based incentives with strict.

Observance of transparency

The Bank also ensures that the guidelines and regulations issued by Bangladesh Bank and Securities and Exchange Commission are properly followed.

The Role of the Board of Directors

The Board of Directors consists of 13 (thirteen) members including CEO and Managing Director. Number of Board members is within the maximum limit set by Bangladesh Bank and Clause the Articles of Association of Janata Bank Limited.

In September, 2009, Dr. Abul Barkat, Chairman and Professor, Department of Economics, University of Dhaka, has been appointed Chairman of the Board. Dr. Barkat, is a reputed economic and a civil society personality, well-known both in home and abroad for his pioneering and breaking research works on economic and human development. The Board is represented professionally experienced members from the fields of economics, banking, accounting, and auditing, medical, civil and legal service. The Board involves setting operational, administrative and financial guidelines, development system and strengthening the overall bank management to face the challenges of changing financial sector. The Board members freely give their views and opinions on all matters, like investments, loan asset and liability management, profit, planning and budgeting, capital planning, person, policies and various risk management issues. The Board arrives at its decision on the basis consensus. The management is accountable to the Board for the execution of the policies and attainment of the Bank's objectives. During the year under review, 57 (fifty seven) Board meetings were held, from which guide and policies were issued in all key operational areas. Directors are placed in a position of true Statute & common law place responsibility on them for the smooth management of the bank. The matters beyond the discretionary power of the CEO & Managing Director, the Board accord its expeditious and judicious decisions to quicken the pace of business growth.

The Role of Audit Committee

The Board reconstituted the Audit Committee (AC) in its 119th meeting held on 09 November with Mr. Chowdhury Abdul Quayum as its Chairman, Dr. Jamaluddin Ahmed, FCA and Dr. R Debnath as members. The audit committee plays a key role, standing at the intersection of management, independent auditors, internal auditors, and the board of directors. Its role is to oversee, monitor, and advise outside auditors in conducting audits and company management to ensure transparency in maintaining financial records. The Audit Committee also reviews Bangladesh Bank's inspector's reports, internal control performance, risk management process and other aspects as per, Bangladesh Bank Guidelines. A total number of 15(fifteen) meetings of Audit Committee were held during the year 2009.

Executive Committee of the Board

The Executive Committee of the Board is constituted as per provisions of the Bank Companies - Act. It exercises all the powers vested by the

Board in respect of financial sanctions, compromises, remission, write off proposals, filing of suits/appeals etc. The Committee comprised 8 members with the Chairman of the Board, 7 Directors and CEO and Managing Director. The Executive Committee of the Board met 12 times during the year.

Credit Committee

The Credit Committee comprises the senior executives including DMD and GM of Credit and other divisions. The Credit Committee is entrusted with the job of evaluating the credit proposals in terms of prospective borrowers earning capacity to repay the loan, business experience and risk associated with the proposals.

Customer Care

Customers are their first priority and the main contributing agent to their success. Their customers come from all walks of life. They are entrepreneurs, professionals, manufacturers, public servants, builders, small traders etc. We care for our customers and provide multi-dimensional services to them. There are One Stop Services in some branches. NRB customers are enjoying Non-Resident Taka Account (NRTA) facility and Non Resident Bangladeshi (NRB) screw accounts services for quick disposal of remittances. In this context, special mention must be made of the vast multitude of our rural customers in general, and the farmers, in particular, who toil throughout the year to feed the nation and save the country from importing food-staff. We gratefully salute them and take a vow to speed up agricultural loans within Bangladesh Bank's policy in this regard to take the best of care of these traditional real productive agents. They have also placed complaint boxes in all of our branches and offices of the Bank, and promptly Respond to complaints with due care.

Corporate Social Responsibility

Janata Bank is aware of the responsibilities of corporate citizenship, as such, they believe that it is their responsibility to help improve the living standard of the poor people, try to alleviate poverty from the society and contribute in the field of education, heath care, and sports etc. their participation in the CSR activities during the year 2009 are mentioned below:

i) Financial assistance for Tk. 7.45 million in education and research work including donation to hold 45th annual convocation of Dhaka University to the tune of Tk. 2.00 million.
ii) Financial assistance of Tk. 5.73 million for health and medicare services to the distressed people of the society including donation of Tk. 2.50 million to Dhaka Ahsania Mission Cancer Hospital.
iii) Financial assistance for poverty alleviation to the tune of Tk. 4.43 million including donation of Tk.2.50 million to the Prime Minister Relief Fund for assistance to Ayla affected peoples in the south west coastal district of the country.
iv) Donation of Tk. 1.50 million to woman freedom fighter named Kakon Bibi for improvement of her distressed life.
v) Financial assistance for protection and improvement of history & culture including donation to Nagarik Committee" for celebration of 400th years of Dhaka city to the tune of Tk.O.50 million.

vi) Financial Assistance for making liberation based films to the tune of Tk. 0.50 million. Janata Bank has made an allocation of Tk. 50.00 million in the budget of 2010 for enhancing its CSR activities effectively.

New Business Products

The Bank has introduced a number of products for the people who have traditionally excluded from banking services. Janata Bank is the first bank in the country to open a designated branch for the NRBs. The service offered for NRBs are foreign currency deposit accounts, remittance system, western union money transfer, advance benefit scheme, NRB Home Loan etc. New banking products that have been introduced are loans under women entrepreneur development program, credit for disabled people, small business development loan, doctor's consumer credit etc. The Bank also provides merchant banking service through establishing a subsidiary company named Janata Capital & Investment Ltd. for active participation in the capital markets, It provide margin loan, service for share trading, underwriting, sponsoring mutual fund and for acting as manager. In the year 2009, an approved Mutual Fund worth Tk, 2,000 million was sponsored by the Bank. The Unit of the Fund will be traded in DSE and CSE in the current year.

Risk Management

Bangladesh Bank advised the banking industry to identify the risk factors associated with business and to take effective measures in the functional process to minimize and control the in the area of lending, internal control, liquidity and treasury management. Introduction and analysis culture, loan classification and corporate clients' ratings are the broad Scherer assessing the risk status of banking takeovers.

Sonali Bank Limited is operated following a sound Corporate Governance practice. The bank management is smoothly running the day to day activities of the bank within the policy guidelines of the Board of Directors and in accordance with the legal & regulatory framework of different regulatory bodies of the country. The main aspects of corporate governance are given below:

Board of Directors and Committees

The Board of Directors mainly deal with formulation of business policies, service regulations, procurement policies, approval of large credit proposals, reschedule of loans, remission of interest, approval of the long term plan, annual budget and audited accounts of the bank. The Board within the powers conferred upon it by the articles, determines its functions and responsibilities. The Board retains full and effective control over the bank, determines the strategies and objectives of the bank and sets the principles for sound business practice. Audit Committee reviews the internal and external audit, financial reporting, corporate affairs and compliance matters.

Legal & Regulatory Compliance

SBL has been carrying out its activities in accordance with the legal and regulatory requirement of Bangladesh Bank & Securities and Exchange Commission (SEC). The bank also ensures compliance of Bank Company Act 1991, Companies Act 1994, and Income Tax Ordinance 1984.

Negotiable Instrument Act 1881, Anti Money laundering Act 2008, other related laws, regulations and reporting requirement.

Disclosure & Transparency

SBL follows a transparent policy in the decision making process and discloses all material facts in the annual report and in the audited Balance Sheet, Profit and Loss Account and notes to the financial statements. Besides, periodical reporting disclosures are made as per requirement of different agencies. A 'Citizens' Charter' stating the products and services of SBL has been published and displayed in all branches for information of general public.

Risk Management

SBL follows standard practice in dealing with credit risk, operational risk, market risk, etc. within the approved policies of the Board of Directors and in accordance with the guidelines of Bangladesh Bank.

Review of Activities

Bangladesh Bank reviews the activities of the bank quarterly as per memorandum of Understanding (MOU) signed with SBL. Besides, Banks and Financial Institutions Division of the Ministry of Finance and the World Bank are monitoring the Key Performance Indicators (KPIs) of the reform package under Enterprise Growth and Bank Modernization Project (EGBMP).The Board of Directors consistently monitors and reviews the implementation of policies and overall performance of the bank along with the performance of overseas outlets of the bank.

Corporate Social Responsibility (CSR)

Sonali Bank Limited (SBL) with its huge distribution channel of 1183 branches including 2 overseas branches has been rendering various services for attaining greater social goals and objectives. In this process, they aim to contribute towards sustainable development of the society as a whole and fulfillment of corporate social obligations in particular. By this time, CSR programs through which the bank has achieved the highest corporate image in the national level. "Profit alone must not be the central focus of this banks operation" is the mission of the institution. Sonali Bank Limited provides financial support for promoting the sports and culture of Bangladesh as its CSR activities. From that point of view the bank is performing CSR activities towards social needs and national development through ethical, legal and commercial conduct. To reinforce CSR activities, the bank has undertaken fresh activities as per instruction and guidelines of Bangladesh Bank. In the year-2009 SBL has performed CSR activities amounting TK.5 1.26 Crore.

Social Services

SBL has been rendering wide range of social services through distribution of various allowances to the Freedom Fighters, Widows, Old-aged citizens, vulnerable groups, Disabled people, etc. as per laid down criteria of the government. Besides, the bank has been disbursing pension of government employees, monthly salary of teachers, govt. and semi govt. officials and many other services at free of cost. Sonali Bank Limited has provided financial help to various Foundations and Organizations for raising funds through lottery and other means.

Empowerment of women and poor

SBL has been providing loan facilities to disadvantaged areas and people at concessional rates. The bank has also been extending wholesale

credit facilities to different micro credit institutions who are in turn lending the same amongst the women and poor people in different IGA (income generating activities). Besides, loan facilities are also extended to farmers @2% interest for production of pulses, spices, etc.

Banking service for the Disadvantaged Groups

With greatest network allover Bangladesh, SBL utilize the opportunity to reach the banking services to the disadvantaged groups with the aim to encourage them in the mobilization of their hard earned savings and creation investment opportunities for them. Besides, it offers banking for the farmers through opening accounts with primary deposit of TK. 10.00 ($ .1450) only and accounts for unemployed youths with primary deposit of TK.50.00 ($ 0.7253) only as per the Govt. instruction. SBL offers annual stipends and scholarships to the brilliant children of the employees of the bank. Sonali Bank Limited always stands beside the helpless people at the time of natural calamities and extends helping hands to the sufferers. SBL donated Tk.25.00 lacs to help the victims of cyclone 'Aila' to the relief fund of the Prime Minister.

Agrani Bank is always committed to adopt highest corporate governance standards for attaining better operational goals. The collective role of the Board of Directors, Managing Director & CEO and the Committees is to ensure excellence in corporate governance practices. The activities of the Bank are always conducted in adherence to highest possible ethical standards for the best interest of the stakeholders.

Corporate Social Responsibility

They are very sensitive to the societal needs in which we operate. They have a deep commitment, loyalty and a high sense of responsibility to our nation and the people. Their ethics are clear: not to earn excessive profits, but to operate in a rational and sensible way. Their corporate social responsibility is about addressing the need of our valued business partners and the community as described in general.

Valued customer

The way they discharge their responsibility to their valued customers is offering different financial products and services to meet their needs with the highest degree of ethics. They feel proud to provide their services to their valued customers without any hidden cost. They believe that their customers are their business partners and they sincerely strive to improve their business relationship with their customers for their mutual benefits.

Shareholders and Employees

They are fully committed to the interest of their shareholders. They increase their shareholders value by optimizing financial performance at least cost. They treat their human resource as an instrument for development. Their workforce is the prime factor of their success. Following an established criteria for promotion 989 employees from different grades were promoted in 2009. Of them, 31 became DGMs, 60 AGMs, 115 SPOs and the remaining 783 in other grades. As usual, the Staff Welfare Fund, which is run by the Bank's employees out of their regular contribution, continued to stand by its members for their well-being. During 2009 a total of Tk. 1.51 crore was allocated from this fund

of which a sum of Tk. 28.50 lakh was donated out to 134 in-service employees and their spouses for health care and Tk. 1.22 crore to 467 retired employees as retirement donation. As a part of its welfare activities, an amount of 1k. 11.10 lakh was given to the families of 55 deceased employees for meeting funeral expenses. In addition, an amount of Tk. 22.80 lakh has been kept aside for awarding merit scholarship to the children of 490 employees for outstanding performance In S.S.C. and H.S.C. examinations. There is a Board of trustees to provide financial support in the staff members as admissible under the rules on their termination or retirement from the Bank services or to their nominees or legal heirs in case of death. To this end, two trusts, Agrani Bank Limited Employees Provident Fund Trust and Agrani Bank Limited Superannuation Fund Trust, are in operation.

Business Partners and Environment

They always try to maintain a good business relationship with their business friends for their mutual growth. Their relationship is based on mutual trust and respect. They transact with them in a fair and transparent way. Their environmental management policy stipulates adherence to environmental health and safety regulation and guidelines, refraining from business that impairs the ability of our future generations to meet their own needs. The policies with regard to safety, health and environment management are also being observed in their lending practices.

Regulators and Community

As a responsible corporate body, they conform to all of the stringent regulations issued by the Government of the People's Republic of Bangladesh and the Bangladesh Bank. Their Corporate Social Responsibility to the community is designed to respond to the huge unmet demand of the society. They share all sorts of values and sentiments, irrespective of caste, creed or color. Moreover, they uphold the concept of avoiding gender discriminations. They keep the door open for empowerment of women workforce to ensure a level playing field in terms of promotion, placement and delegation of power.

The Bank contributed Tk.25 (twenty five) lakh to Prime Minister's relief fund for the rehabilitation of the Aila affected people.

They arrange competition for the children regularly to explore their literary talents in a colorful program named Agrani Bank Shishu Sahittaya Award at Shishu Academy. In 2009, They donated Tk. 2.00 (two) lakh to Shishu Academy for arranging the program.

They jointly, sponsored the 45th Convocation of University of Dhaka. For that program they contributed Tk.10 (ten) lakh to the authority of University of Dhaka.

They donated Tk.1 (one) lakh to High Care Society for the treatment of dumb children. They also donated Tk.1(lakh) for the treatment of Mr. M.A Halim, Senior Professor of Department of International Relations, University of Dhaka.

EXIM Bank also attaches paramount importance to corporate governance. Corporate governance is most often viewed as both the structure and the relationships which determine corporate direction and performance. It is the relationship between corporate managers,

directors and the providers of equity, people and institutions who save and invest their capital to earn a return. It ensures that the board of directors is accountable for the pursuit of corporate objectives and that the corporation itself conforms to the law and regulations. It is considered as one of the most important component for continuous and sustainable growth of an organization, particularly in banking industry. At EXIM Bank, corporate governance is given the prime importance to comply its principles for the interest of sound growth of the Bank. The Securities and Exchange Commission had issued a Corporate Governance Guidelines for the companies that were listed with Stock Exchanges. The specific areas covered are composition of Board, formation of committees, transparency in disclosure of relevant, reliable financial and operational information, information on ownership and control, information on internal processing of management, use of information technology and system, risk management system etc.

Board of Directors

The Board of EXIM Bank consists of 18 directors including one Independent Director in compliance with both Bangladesh Bank as well corporate governance guidelines of Securities Exchange Commission. Board members include persons of high caliber with academic and professional qualifications. In line with the directives of the regulatory authority, the Board looks after the corporate philosophy, policy issues, making rules and procedures, approving business targets & strategy to run the business. The Board formed two key committees: one is the Executive Committee and the other is Board Audit Committee.

Executive Committee

The Executive Committee comprises of 12 directors. The Executive Committee takes decision on the routine and operational matters beyond delegated power of management. The committee ensures implementation of policies, approves investments and other business proposals as per approved policy guideline of the board. The Committee held 34 (Thirty four) meetings during the year 2009 and 45 (Forty five) meetings in 2008.

Audit Committee

The Board Audit Committee consists of 04 members including Independent Director. The Committee carries out business according to its charter approved by the Board on the basis of guidelines of the Bangladesh Bank. The committee works out a plan of routine audit and inspection of Branches and Divisions of Head Office by the Audit Division and discuss/review/evaluate and advise on audit and inspection report. The directors keep regular vigilance on the banking activities through the Audit Committee in order to ensure better internal control system. The Committee held 03 (Three) meetings during the year 2009 and 04 (Four) meetings in 2008.

The Directors' Report to the Shareholders

In compliance with SEC requirement, it is required to include the additional statements in the Report which are as follows:-

a) that the financial statements prepared by the management of the issuer company present fairly its state of affairs, the result of its operations, cash flows and changes in equity.

b) that proper books of account of the issuer company have been maintained.

c) that appropriate accounting policies have been consistently applied in preparation of the financial statements and that the accounting estimates are based on reasonable and prudent judgment.

d) that International Accounting Standards, as applicable in Bangladesh, have been followed in preparation of the financial statements and any departure therefrom has been adequately disclosed.

e) that the system of internal control is sound in design and has been effectively implemented and monitored.

f) that there are no significant doubts upon the issuer company's ability to continue as a going concern. If the issuer company is not considered to be a going concern, the fact along with reasons thereof should be disclosed.

g) that significant deviations from last year in operating results of the issuer company should be highlighted and reasons thereof should be explained.

h) that key operating and financial data of last three years have been furnished in summarized form in the Financial Performance at a Glance at Page No. 12.

Number of Board Meetings and the attendance of Directors

SI. No.	Name of the Directors	Position	Meeting Held	Attended
01.	Mr. Md. Nazrul Islam Mazumder	Chairman	13	12
02.	Mr. Md. Nazrul Islam Swapan	Director	7	6
03.	Mr. Mohammad Abdullah	Director	13	11
04.	Mr. Md. Altaf Hossain	Director	7	7
05.	Mrs. Nasreen Islam	Director	13	8
06.	Mr. Mohammed Shahidullah	Director	13	11
07.	Mr. Md. Fahim Zaman Pathan	Director	7	5
08.	Mrs. Nasima Akhter	Director	13	7
09.	Mr. A.K.M Nurul Fazal Bulbul	Director	13	10
10.	Alhaj Md. Nurul Amin	Director	13	9
11.	Mr. Zubayer Kabir	Director	13	6
12.	Mrs. Rizwana K. Riza	Director	7	—
13.	Mr. Md. Habibullah	Director	13	11
14.	Mr. Anjan Kumar Saha	Director	7	6
15.	Mr. Md. Abdul Mannan	Director	13	13
16.	Mr. Abdullah Al-Zahir Shapan	Director	13	10
17.	Bay Leasing & Investment Ltd. (Represented by Mr. MahbuburRashid)	Director	13	13
18.	Mr. Muhammad Sekandar Khan	Independent Director	13	5
19.	Mr. Kazi Masihur Rahman	Managing Director	13	13

Report on Corporate Social Responsibility

A generation confident with individual worth warns, with fellow-feelings and brilliant with national spirit can someday make the nation it belongs to capitalize on its potentialities to the hilt. EXIM Bank believes that education is the sole catalyst that affects these traits in a generation, and this is what the EXIM Bank CSR activities pivot on—promotion of education among all. EXIM Bank has taken around 1200 underprivileged

meritorious students from all corners of the country to take care of their educational expenses till their completion of educational life. Two of the endeavors EXIM Bank has taken to this end are EXIM Bank Scholarship Programme, a stipend package for poor and meritorious students that takes care of the beneficiaries throughout their student life, and Education Promotion Scheme, a profit- free investment scheme for insolvent but meritorious students.

EXIM Bank Scholarship Programme, launched in the year 2006 with 61 poor, and meritorious students selected from different reputed educational institutions of Dhaka City including Govt. Laboratory High School, Viqarunnissa Noon School & College, Dhaka University, BUET, Dhaka Medical College, etc. enrolled as many as 1000 students from around 150 reputed educational institutions across the country by 31 December 2009. They are enrolled in this programme to be taken care of their whole educational life subject to their fulfillment of the eligibility criteria that include satisfactory academic results, non-involvement in student politics, financial insolvency, etc. So far Tk. 32.9 million has been disbursed as scholarship under this programme including Tk. 13.6 million in 2009. The programme is going to be extended to enrol another 1000 students by next two years.

Under Education Promotion Scheme, quard or interest-free loan is provided for poor but meritorious students to help them bear monthly educational expenditure including academic expenses, food, accommodation, etc. The quard is disbursed to the selected students in monthly installments till their accomplishing the master degree. Under this programme the students are required to repay the amount (only the principal amount) in long-term monthly installments after they have joined a confirmed job after accomplishing their education properly. By 31 December 2009, Tk. 19.7 million was sanctioned to take care of around 138 poor but meritorious students from a good number of reputed educational institutions like Dhaka University, Chittagong University, Dhaka Medical College, BUET, Bangladesh Agricultural University, Shahjalal University of Science and Technology, etc. By the end of the next year i.e. 2010 the number of beneficiaries under this programme will have grown to 200, Insha Allah.

Beside education-promotion-CSR activities, EXIM Bank, driven solely by undiluted welfare-intention, has always responded to the plight of the people of the country. It has diversified its activities to reach the distressed in all forms—from the natural calamity-hit to the monga-stricken, from the bereaved to the unemployed and from the diseased to the disabled. Furthermore, we reach the entrepreneurs of sports and culture with equal sense of corporate responsibility. For smooth implementation of their CSR plans, they have already established a foundation named EXIM Bank Foundation. We put aside at least 2% of our annual profit for the foundation fund each year to conduct CSR activities. The mainstream CSR activities are carried out through this foundation. Besides, a good deal of charity is clone from the zakat fund. One of the vital areas we are dealing with as a part of our CSR activities is helping people survive natural calamities. Under this welfare programme, EXIM Bank provides relief in cash and kind for flood, fire and cyclone victims and cold-stricken people. The aim of these CSR

activities is to help the target group overcome their provisional handicap and contribute to the socio-economic growth as soon as possible. EXIM Bank is always prompt to stand beside the helpless. The Dhaka Pilkhana carnage in 2009 rendered a good number of families helpless in absence of their sole guardians. EXIM Bank immediately took over the charge of eight of the families and will continue to bear their living and other expenses at a decent standard primarily for ten long years at a stretch. At the same time it paid heed to the cry of the autistic children at Sena Sahayak School at Dhaka Cantonment last year with the same fellow-feeling. While doing so, it did not stop contributing profusely to the organization of sports and cultural events at national and local levels.

In response to the call of the Dhaka City Corporation, EXIM Bank has been shaming a good portion of the mammoth task of beautifying the capital since 2005. To make the capital a modern city enriched will, adequate urban amenities, EXIM Bank always joins hands with the government. Besides, a good share of its fund goes to charitable organizations working for the betterment of the socio-economic condition of the people as well.

Conclusion

The study includes the corporate governance practices of four commercial banks in Bangladesh. They have been carrying out its activities in accordance with the legal and regulatory requirement of Bangladesh Bank & Securities and Exchange Commission (SEC). The banks also ensure compliance of Bank Company Act 1991, Companies Act 1994, and Income Tax Ordinance 1984. Negotiable Instrument Act 1881, Anti Money laundering Act 2008, other related laws, regulations and reporting requirement. They follows a transparent policy in the decision making process and discloses all material facts in the annual report and in the audited Balance Sheet, Profit and Loss Account and notes to the financial statements. Besides, periodical reporting disclosures are made as per requirement of different agencies. Corporate governance mechanisms and controls are designed to reduce the inefficiencies that arise from moral hazard and adverse selection. The Securities and Exchange Commission had issued a Corporate Governance Guidelines for the companies that were listed with Stock Exchanges. The specific areas covered are composition of Board, formation of committees, transparency in disclosure of relevant, reliable financial and operational information, information on ownership and control, information on internal processing of management, use of information technology and system, risk management system etc. Internal corporate governance controls follow mainly monitoring by the board of directors, internal control procedures and internal auditors, balance of power and performance based remuneration. External corporate governance help the external stakeholders exercise over the organization through good competition, debt covenants, government regulations, managerial labor market and media pressure. However corporate governance activities of the said banks are really satisfactory in the context of regulatory frameworks and expectations of the stakeholders.

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Audit Committee and the Amendments Of Quarterly Financial Reports Among Malaysian Companies

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ABSTRACT
One of the tasks of an audit committee is to ensure the reliability of financial reports. The prevailing amendments of the quarterly reports among companies however question the effectiveness of audit committees. This paper examines the association between audit committee characteristics (independence, expertise and activities of audit committees) and the amendments of quarterly financial reports of Malaysian companies. Control variables, namely size of board of directors, size of company, profitability and auditor are also included in this study. In this study, each of the 63 sampled companies that amended their quarterly reports in 2005 is matched with a company that did not make any amendments. The univariate analysis shows that companies that amend their quarterly reports are likely to be those having audit committees that are less independent, and are comprised of less than two financial experts. They also tend to have smaller board of directors. Consistent with the univariate test, results of the regression test indicate that companies having audit committees with two or more financial experts are less likely to amend their quarterly reports. Although other variables (except for auditor) appear to have a negative association with amendments, statistically the association is insignificant. This study also observed that most of the amendments are due to oversight, mathematical mistakes and typographical errors. The findings suggest that to be effective, audit committees should have more than one financial expert.

Keywords: Audit committee, restatement of quarterly reports, amendment of quarterly reports, audit committee effectiveness.

JEL Classification Code: M41, M42, M49

1. Introduction

The Malaysian government has taken initiatives as early as 1994 by mandating audit committee to all public listed companies in the country. Further, because of major corporate governance collapses worldwide, the government through Ministry of Finance has established a High Level Finance Committee with the task of reviewing and reforming corporate governance practices in Malaysia. This committee was assigned to come out with the Malaysian Code on Corporate Governance (MCCG). The

Code was first issued in March 2000. While the Code remains as a voluntary guide and is meant to be non-statutory and self-regulatory, in January 2001, Bursa Malaysia (formerly known as the Kuala Lumpur Stock Exchange) strengthened its efforts towards enhancing corporate governance practices in Malaysia by revamping its Listing Requirements. For instance, Chapter 15 of the revamped Listing Requirements specifically addresses corporate governance issues, and in particular the recommendations of the MCCG have become an integral part of the revamped Bursa Malaysia Listing Requirements (BMLR). In relation to audit committee, the MCCG suggests that the board should establish an audit committee with at least three directors, a majority of whom are independent and the chairman of the audit committee should be an independent non-executive director. Part 2 of the Code also specifies the duties of audit committees and the need for the board to establish an internal audit function. Compliance to Part 2 of the Code is voluntary but firms are required to state in their annual reports the extent of their compliance with an explanation for any departure.

An audit committee is an important board committee that monitors the management and assists the board of directors in overseeing and ensuring adequate functioning of internal control mechanisms (Haron et al., 2005). An audit committee helps determine indicators of problems, mitigate possible damages, and enhance shareholders' value. One of the duties of the audit committee is to oversee companies' financial performance and ensure the reliability of their reporting. As outlined in the MCCG (Finance Committee on Corporate Governance, 2000), an audit committee is to review the quarterly and year-end financial statements of a company. The review should focus on any changes in accounting policies and practices, significant adjustment arising from the audit, the going concern assumption and compliance with accounting standards and other legal requirements. The audit committee should also discuss problems and reservations arising from the interim and final audits and any matter the auditor may wish to discuss (in the absence of management, where necessary). Recently, the issue of whether the audit committees are effective in carrying out their duties has been the subject of numerous investigations. This is because of the pervasive cases of financial statement errors and irregularities, which in some cases amount to fraudulent reporting. The number of financial restatements (also referred to as amendments in this paper), for example has caused concern regarding the quality of financial reporting and the effectiveness of audit committees. In the U.S for example, there have been many cases of restatements, especially since the Enron case (Zeff, 2007). In the case of Malaysia, mere observations on the announcements of amendments made on the Bursa Malaysia website show that the phenomenon is quite common among Malaysian listed companies. This paper attempts to investigate the association between amendments of quarterly financial reporting and audit committee characteristics because it is the duty of the audit committees to review the quarterly financial statements and ensure that they are reliable. We particularly focus on the amendments made to quarterly reporting because to our knowledge, no such specific studies have been conducted in Malaysia. Similar to prior studies (see The U.S General Accounting

Office (GAO), 2003; and Abbott et al., 2004), this study presumes that weak audit committee is at least partially responsible for financial reporting errors that manifest ultimately as amendments. In particular, the objective of this study is to determine whether audit committee characteristics (namely committee independence, members' expertise and activity) are associated with amendments of the quarterly reports. These characteristics are tested based on the belief that to be effective, an audit committee should among others, be independent, financially literate and meet regularly. In addition, this study explores the reasons as to why quarterly reports are amended.

Amended quarterly reports are the quarterly reports published and issued after the first report has been released and before the next quarter's report is issued. When a quarterly report is amended, a new set of financial statements would be submitted to Bursa Malaysia and released to the public on its website. There are a number of studies regarding audit committee characteristics and restatements of financial reporting (see for example, Agrawal and Chadha, 2005; and Abbott et al., 2004). Abbott et al. (2004) for example examine the association between the characteristics of audit committee and the likelihood of financial statement restatements. As far as we are concerned, most of the studies were concentrated outside Malaysia. Perhaps, the closest studies to ours are those conducted by Mohd Saleh et al. (2007) and Haron et al. (2005). The former examines the effectiveness of audit committee characteristics in monitoring management behavior with respect to their incentives to manage earnings. It is found that the presence of a fully independent audit committee reduces earnings management practices, and the interaction between proportion of audit committee members with accounting knowledge and the frequency of meeting is significantly related to earnings management practices. The latter investigates whether financial distress in companies is associated with audit committee effectiveness. However, there was no evidence of association between the financial health of companies and audit committee effectiveness.

This study is a significant contribution because it examines the effectiveness of audit committees in monitoring the reliability of quarterly reporting in an emerging market, Malaysia. Like most other emerging markets, Malaysia faces challenges in developing reliable and transparent corporate financial reporting. As discussed by Anwar and Kar (2003), the following factors may contribute to the challenges: companies having high degree of family ownership, minority shareholders and institutional investors are generally passive, many boards and audit committees are not effective oversight mechanisms, and enforcement systems are generally inadequate. More importantly, this study will determine if the initiatives taken by the authorities to require companies to have audit committees that are independent, financially literate and "active" are supported.

The remainder of this paper is organized as follows. In the next section, a review of the requirements for quarterly reporting and audit committee in Malaysia will be presented. Next, there will be a review of literature regarding audit committee effectiveness. It is followed by sections on hypothesis development and research methods. Next, the

findings will be discussed, and finally, the paper will end with a conclusion section.

2. Institution setting

All companies listed on the Bursa Malaysia are required to issue quarterly financial reports since 1999 to replace half-yearly reports, following the 1997/98 Asian financial crisis. The reports are to be issued to the Exchange within 60 days after the end of the quarter and they need not be audited. Bursa Malaysia will subsequently release the quarterly financial reports to the public on its website. The Bursa Malaysia Listing Requirement (BMLR) requires companies to correct inaccurate, incomplete or misleading financial disclosure in a timely manner. Where quarterly financial reporting is concerned, the corrected report is usually released as an amended quarterly financial report, before the next quarterly report is due for release. The amendment provides an explicit acknowledgement of material omissions, or misstatements in the previously issued financial statement. Similar to the original report, the amended report will include the whole set of financial statements.

The Listing Requirements require every company to form an audit committee comprising of at least three members, a majority of whom should be independent directors. A director is classified as independent if he or she is a non-management director, free of any family relationship or any material or business relationship (other than stock ownership and the directorship) with the company or its management. This requirement is imposed to improve investors' confidence and enhance the capability of audit committees to achieve their objectives and to promote better corporate governance and transparency in the capital market.

In order to fulfill audit committee responsibilities for monitoring internal control and financial reporting, audit committee members should possess the necessary financial expertise. The Listing Requirements requires that at least one of the audit committee members is a member of The Malaysian Institute of Accountant (MIA) or if he or she is not a member of MIA, he or she must have at least 3 years' working experience and (i) must have passed the examinations specified in Part l of the 1st Schedule of the Accountants Act 1967; or (ii) must be a member of one of the associations of accountants specified in the Act; or fulfils such other requirement as prescribed by Bursa Malaysia. In short, to be considered a financial expert, an audit committee member should possess an accounting background.

3. Audit Committee Effectiveness

In an agency framework of a company, the board of directors (BOD) and the audit committee evolve as monitoring mechanisms because of a separation of ownership from control and a possible discrepancy of the incentives of outside shareholders and managers. According to Fama and Jensen (1983), agency theory suggests that owing the separation of corporate management and ownership, shareholders require protection because management may have agendas different from their owners and thus may not always act in the owners' best interest.

Hence, based on agency theory, the formation of an audit committee is

expected to protect the interest of the principal and to ensure that the management carries out its roles in accordance with the contract. However, audit committees are not necessarily effective in carrying out their duties. For instance, an audit committee may not be effective if its members are not independent of management. Audit committees may also be ineffective in monitoring the financial reports if none of the members is accounting literate.

Several approaches have been adopted in measuring the effectiveness of audit committees. According to Song and Windram (2004), one of the ways is to seek perceptions of economic players such as the internal and external auditors and audit committees as to various measures of effectiveness. Another approach is by examining the activities carried out by the audit committees (see for example Menon and Williams, 1994). Other studies associate the effectiveness of audit committees with the quality of financial reports of which the latter is measured, among others, by compliance with accounting standards (Song and Windram, 2004), earnings management (Klein, 2002), accounting fraud (Beasley, 1996) and financial restatements (Abbott et al., 2004). DeZoort et al. (2002) provide a comprehensive review of literature on audit committee effectiveness. Our approach mirrors the method used by Abbott et al. (2004), except that we examine the restatements of quarterly reports, instead of annual reports.

4. Hypotheses Development

Another aspect of audit committee that has been the subject of investigation is the influence of audit committee characteristics on its effectiveness. The recent requirements by stock exchanges and other authoritative bodies worldwide have implicitly assumed that independence, financial literacy and activity of an audit committee will improve its effectiveness. Thus, we develop the hypotheses as discussed below.

Audit Committee Independence

Based on agency theory, the more independent the audit committee is, the more effective it would be in monitoring managerial opportunism. DeZoort and Salterio (2001) for example found that when there were disputes between management and external auditors, independent audit committee members were more likely to support the auditors rather than the management. Independent audit committee members add value to a firm as they bring in experience and reputation that help improve the committee's decision making and effectiveness in performing their monitoring duties. It is also argued that independent audit committees have a greater incentive to avoid activities that would damage their reputation than non-independent audit committees (Abbott and Parker, 2000).

Various studies provide evidence of the positive influence of audit committee independence on its effectiveness. Among others, Song and Windram (2004) provided strong evidence that in the UK, audit committee independence was negatively associated with the violation of accounting standards. In another study, Klein (2002) showed that audit committee independence was negatively associated with abnormal accruals. Abbott and Parker (2000) suggested that independent audit

committees were less likely to be involved in fraudulent or misleading financial reporting. Along the same vein, Beasley et al. (2000) found that fraud companies in the technology, healthcare and financial service industries appeared to have a lower level of audit committee independence compared to non-fraud companies. The foregoing discussion leads us to the following hypothesis:

H_1: There is a negative association between the independence of audit committee and the amendment of quarterly reporting.

Audit Committee Financial Expertise

The expertise requirement is generally fulfilled by having a background in finance that permits the board to conclude in good faith that the director is capable of understanding the most complex issues of accounting and finance encountered in the course of the company's business. Moores (2004) as cited in Razaee et al. (2003) argues that an audit committee with financial literacy would have the ability to understand the important accounting judgments management makes, why management makes them and how management can use those judgments to manipulate financial statements.

The reported empirical evidence supports the argument that financially literate and expert audit committee is beneficial to a company. Bedard et al. (2004) suggest that an audit committee whose members have more financial experts is more effective in constraining earnings management. They find that the presence of at least one member with financial expertise is associated with a lower likelihood of aggressive earnings management.

Agrawal and Chadha (2005) show that the probability of earnings restatement is lower in companies whose audit committees have an independent director with a background in accounting or finance. Abbott et al. (2004) find that the absence of a financial expert on the audit committee is significantly associated with an increased probability of financial misstatement and financial fraud. Along the same vein, Xie et al. (2003) show that the presence of investment bankers on an audit committee is associated with lower discretionary accruals in companies. DeFond et al. (2004) report a positive market response to the addition of a financial expert to the audit committee.

Using an experimental approach, McDaniel et al. (2002) examine the effect of financial expertise on audit committee's judgments of financial reporting quality. They find that a financial expert is able to distinguish certain quality shortcomings in financial reporting issues that a financial illiterate member is not able to distinguish. Pearce and Zahra (1991) found that boards lacking expertise and independence were less powerful and had less than superior corporate financial performance.

There is an increasing recognition that service on an audit committee might require an occupational background that provides a strong working knowledge, business practices and concepts (Kesner, 1988). Kalbers and Forgarty (1993) note that an audit committee member with skills in accounting and finance as well as knowledge of the company and industry could contribute to the effectiveness of the committee and thus provide "expert power".

DeZoort (1998) documents that audit committee member with auditing or previous internal control evaluation experience make better

judgments of the internal control oversight. According to DeZoort and Salterio (2001), audit committee expertise increases the possibility that detected material misstatements will be communicated to the audit committee and corrected in a timely fashion. Collectively, the above evidence suggests that audit committee expertise can reduce restatement of financial reporting, leading to the following hypothesis:

H_2: There is a negative association between financial expertise of an audit committee and the amendment of quarterly reporting.

The level of financial expertise is measured as follows: a score of "1" is given if there are two or more financial experts, otherwise "0" is given. Consistent with BMLR, an audit committee member with an accounting background is considered an expert.

Audit Committee activities (meetings)

An active audit committee would indicate the level of effort that has been made to ensure quality financial reporting. Activity can be measured in different ways, such as meeting frequency, meeting duration and information exchange during the meeting (Song and Windram, 2004). It has been suggested in the literature that meetings are significant events for monitoring financial reporting (Menon and Williams, 1994).

The number of meetings held by an audit committee in a year would give an indication of how active the committee is. In Malaysia, the regulation does not stipulate a minimum number of meetings that shall be held by an audit committee. Kang (2001) suggest that at least five meetings annually are required to gain sufficient insight into the firm's financial situation.

Meanwhile, the Blue Ribbon Committee (1999) and the Treadway Commission (1987) suggested that audit committees should meet at least four times a year. Abbott et al. (2004) find that companies with audit committee meetings of at least four times annually have lower occurrence of financial reporting restatement compared to those with less than four meetings. Xie et al. (2002) found that audit committee meeting frequency is directly associated with reduced level of discretionary current accruals. Abbott et al. (2000) provided evidence that audit committees that met at least twice a year were less likely to be sanctioned by the US Securities Commission (SEC) for fraudulent financial reporting. Similarly, Beasley et al. (2000) revealed that audit committees of fraud companies in the technology and healthcare industries held fewer meetings than industry benchmarks. Although not statistically significant, Song and Windram (2004) provided an indication that an audit committee that meets regularly has a positive influence on its effectiveness as far as conformance with the accounting standards is concerned.

Based on the above discussion, it is believed that a committee that meets more often should be able to devote more time to issues regarding the quality of financial reporting. Therefore, this study expects the incidence of amendments to be inversely related to the number of audit committee's meeting. The hypothesis to be tested is as follows:

H_3: There is a negative association between the number of audit committee meetings and the amendment of quarterly reports.

Control variables

This paper acknowledges that various other variables may also influence the quality of financial reporting. For the purpose of this study, board of director size, company size, company performance and auditor are used as control variables. Size of the board of directors is expected to have a negative influence on the amendments. Larger boards provide a bigger pool of candidates from which audit committees are appointed. Size of a company is also expected to be negatively associated with the amendments of financial reporting. This is because large companies have greater resources which would enable them to appoint reputable auditors and non-executive directors, thus improving audit committee effectiveness (Song and Windram, 2004). Beasley et al. (2000) for example found that companies committing fraud are relatively small. We also expect that size of an auditor would have a positive impact on the quality of financial reporting. Large auditors are more concerned with maintaining their reputation, and thus are less likely to produce erroneous reports. Although quarterly reports are not necessarily audited, auditors play a role in reviewing the quarterly reports. In her survey, Ku Ismail (2003) for example found that about one-third of sampled companies in Malaysia had their first three quarterly reports reviewed by the auditors (although none were audited). As for the final quarter's report, 60 percent and 20 percent of the companies had the reports audited and reviewed, respectively.

Previous studies often associate financial misstatements with less profitable or troubled companies. As cited by Beasley (1996), companies with poor financial performance would place too much emphasis on earnings and profitability, thus would be more likely to commit financial fraud. Similarly, we believe poor performing firms are more likely to produce financial statement errors that ultimately result in amendments.

5. Research Methods

Data Collection

Data are collected from the Bursa Malaysia website by searching all quarterly financial reports published in year 2005 that were later amended. Quarterly reports of the year 2005 are investigated because at the time of investigation, they were the most recent published data available. As quarterly reports are quite new in Malaysia, we believe that the most recent data would be more relevant as companies are now used to the new reporting requirement. Only companies listed on the main board of Bursa Malaysia are investigated. This is because they are large and more likely to be followed by analysts. Out of 647 main board companies listed in 2005, 126 (19.5 percent) amended their quarterly reports during the year. The amended quarterly reports of these 126 companies are observed in identifying the reasons for amendments. In determining the influence of audit committee on amendments, one-half of these companies (63) are selected as the subjects of investigation. A proportionate stratified random sampling technique based on sectors is used. The distribution of companies according to sectors is depicted in Table 1. A sample of 50 percent is sufficient in making generalization of the population.

(INSERT TABLE 1 ABOUT HERE)

Accordingly, each of the sampled companies that amend their quarterly reports is matched with a control company having the same core business and of comparable size. Subsequently, annual reports of selected companies are collected in order to scrutinize the Audit Committee Report therein and to collect other relevant information about the companies.

Data analysis

A multiple logistic regression represented as follows is used to test the hypotheses.

$$AMEND = \alpha + \beta_1 INDAC + \beta_2 EXPERT + \beta_3 MEET + \beta_4 BDSIZE + \beta_5 COSIZE + \beta_6 ROA + \beta_7 AUDIT + \varepsilon$$

Where:

AMEND	=	"1" if a company amends and "0" if a company does not amend.
INDAC	=	Independence of audit committee measured by the percentage of independent directors in the audit committee. A director is considered independent if he or she is a non-management director, free of any family relationship or any material or business relationship (other than stock ownership and the directorship) with the company or its management.
EXPERT	=	Financial expertise of the audit committee, "1" if there are two or more financial experts, and "0" if less than two. Consistent with BMLR, an audit committee member with an accounting background is considered an expert.
MEET	=	Level of activity, measured by the number of meetings in the financial year.
BDSIZE	=	Size of the board of directors, measured by the number of directors on the board.
COSIZE	=	Size of a company, measured by the natural log of total assets.
ROA	=	Performance of a company, measured by return on assets.
AUDIT	=	Auditor of a company, "1" if audited by Big 4, "0" otherwise.
ε	=	error term of residual.

The measurements used in measuring the above variables are consistent with those adopted in other similar studies.

6. Analysis of results

An analysis of the amendments reveals that a majority of the companies (102 out of 126) amend only once during the year. Nineteen of the companies amended twice and 5 others issued three amendments, which gives a total of 155 amendments (see Table 2).

(INSERT TABLE 2 ABOUT HERE)

Table 3 shows the distribution of amendments according to quarters. It appears that a majority of the amendments (40.6 percent) are related to the fourth quarter's report. The first and third quarterly reports accounted for 22.6 and 21.9 percent of the amendments, respectively, while only 14.8 percent of the amendments are related to the second quarter's reports. It is not surprising that more amendments are made to the fourth quarter's report than any other reports. This is because the fourth quarter's report, covering not only the quarter but also the whole year, is just like another annual report. Companies would try to produce the same figures in both reports because any difference that arises between the fourth quarter's report and the annual report is to be explained to Bursa Malaysia. Therefore, it is likely that companies amend the errors before they issue the audited annual reports.

(INSERT TABLE 3 ABOUT HERE)

Upon reviewing the amended quarterly reports, six reasons for amendments were identified. Some companies had more than one reason. Table 4 shows the distribution of the reasons. It appears that a majority of the amendments are due to oversight (26.9 percent), mathematical mistakes (26.4 percent), and typographical errors (23.9 percent). They are followed by incorrect used of existing facts (18%). Two other reasons, change in presentation and errors in the application of accounting principles, are infrequent.

(INSERT TABLE 4 ABOUT HERE)

The question of whether the amendments are due to errors or irregularities is however, not addressed in this study. According to Gleason et al. (2004), errors are unintentional misstatements in the financial statement, while irregularities are intentional misstatements. Intent is often difficult to determine in practice, particularly in matters involving accounting estimates and the application of accounting principles. Mere observation of the reasons shows that most of the amendments in this study are likely due to errors since 78 percent of the reasons are either mathematical, or typographical errors, or due to oversight. Although these amendments are less likely to be caused by irregularities, the misstatements or omissions would still jeopardize the reliability of the reports.

Table 5 shows the composition of the audit committees of amend and control companies with regard to independence, financial expertise and number of meetings. Generally, amend companies are less independent, have lesser number of financial experts and meet less regularly

compared to control companies. This is consistent with prior evidence such as that of Song and Windram (2004). A majority of audit committees (94.4%) meet the requirements of the BMLR in which a majority of the audit committee members are independent. However, seven (5.6%) of the sampled companies did not observe the requirement. The overall mean for the percentage of independent directors in each audit committee is 70 percent.

As for the number of financial experts, Table 5 shows that a majority of the audit committees (98.4%) have at least one financial expert. Only two audit committees (1.6%) did not have any experts and thus did not comply with the Listing Requirements. The overall mean number of experts is 1.10. Comparing this result with that of Haron et al. (2005), there appear to be an improvement as far as expertise is concerned. Haron et al. found that 91% of the companies in their studies have at least one member of audit committee who is financially literate.

(INSERT TABLE 5 ABOUT HERE)

Although Bursa Malaysia does not specify the number of meetings to be held by an audit committee, there have been suggestions that audit committees should at least meet four or five times a year (see Blue Ribbon Committee, 1999; and Kang, 2001). Table 5 shows that a majority of the audit committees meet between four to six times a year with a mean of 5. Only 4 audit committees (3.2%) meet less than four times. This is consistent with Haron et al. (2005) who found that 99 percent of the sampled firms meet at least four times a year.

Table 6 shows the descriptive statistics of the variables and the results of the univariate analysis comparing the difference in means between companies that amend and companies that do not. INDAC (audit committee independence), NMEXPERT (number of experts) and EXPERT (whether companies have two or more experts), and BDSIZE (size of board of directors) seem to differ between the two groups of companies, significantly. Other variables (MEET, COSIZE, ROA and AUDIT) do not appear to differ. Results suggest that amend companies are more likely to have audit committees that are less independent and less financially expert. Amend companies also have smaller board of directors. This is consistent with most of the previous findings. For the purpose of regression, we drop NMEXPERT and use EXPERT because a majority of companies have only one expert.

(INSERT TABLE 6 ABOUT HERE)

To detect any significant multicollinearity problem, we conducted a pair-wise correlation analysis, the results of which are depicted in Table 7. The highest correlation coefficient of 0.509, that is between company size and ROA shows that there does not appear to be a multicollinearity problem in the model.

(INSERT TABLE 7 ABOUT HERE)

Table 8 presents the results of the logistic regression. Cox & Snell R^2

and Nagelkerke R^2 account for 12.6 percent and 16.9 percent of the variation, respectively. Hosmer-Lemeshow statistics (p = 0.206) show that the model fit is acceptable. The classification table indicates how many observations have been predicted correctly. It shows a prediction of 61.1% correctness. Generally, the higher the overall percentage of correct predictions, the better the model is. This indicates that the results statistically support the model used in the analysis.

(INSERT TABLE 8 ABOUT HERE)

Evidence shows that audit committees that have two or more experts are less likely to produce errors and amend the quarterly reports. This shows that increasing the number of financial experts to two or more would improve the effectiveness of audit committees in ensuring the quality of the quarterly reports. Other variables, although are in the expected direction, are not significant in explaining the amendments made in the quarterly reports. The requirement by Bursa Malaysia that companies have at least one member in its audit committee who is a financial expert is a positive move. However, this study suggests that the effectiveness of an audit committee would be improved if it is comprised of more than one financial expert. The result supports the findings of previous studies such as those of Agrawal and Chadha (2005) and Abbott et al. (2004) that found that financial expertise on the audit committee is negatively associated with financial misstatements. The coefficient of INDAC (independence) in the regression model is high and there is an indication that it is negatively associated with amendments. However, statistically, the regression results provide weak evidence to support the hypothesis. Similar to what we predict, other variables, except for AUDIT, also tend to have a negative association with amendments. However, statistically they are not significantly associated. Further studies may look into this issue by differentiating between errors and irregularities and test whether the audit committee variables may better influence irregularities rather than errors.

7. Conclusion

The requirement for companies to form an audit committee is aimed to improve investors' confidence in the capital market. One of the tasks of an audit committee is to oversee companies' financial performance and ensure the reliability of their reporting including the annual and quarterly reports. Despite the existence of audit committees in all listed companies, financial statement errors which give rise to amendments of the financial statements (annual and quarterly) are common among companies in Malaysia. This study examines if characteristics of an audit committee (namely independence, expertise and activity) would influence the quality of financial quarterly reports issued, particularly by examining the amended reports. Board of director size, company size, company performance and auditor are the control variables. Univariate analysis provides evidence that companies that amend are more likely to have audit committees that are less independent, comprised of less than two financial experts and have smaller board of directors. Results of the regression test support the univariate analysis that to be more effective

in monitoring financial statements, audit committees should comprise of at least two financial experts. The regression results provide an indication that other variables (except for auditor) also affect the amendments in the hypothesized direction (negatively) but statistically they are not significant. Results also show that most of the companies amend their quarterly reports to correct mathematical mistakes and typographical errors.

Overall, this study supports the initiatives taken by the relevant authorities at tightening up the rules and regulations pertaining to audit committees in ensuring that they perform their responsibilities effectively. The authorities may consider requiring audit committees to have more than one financial expert in the future. The fact that this study only focuses the test of the effectiveness of audit committees on only three of its features may limit the findings. Other features of an audit committee that may influence its effectiveness such as the real activity of an audit committee and meeting duration may be employed in future studies. This study is also limited by the fact that company variables such as complexity and internal control are not included in the model. The fact that this study does not consider interactive factors is another limitation. Future research may also test the effectiveness of an audit committee in monitoring the quality of financial reports by observing the incidence of irregularities and fraud.

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TABLE 1
Distribution of sampled companies by sector

Bursa Malaysia sector	No. of amend companies	Sample companies
Trading/Services	32	16
Industrial Product	31	15
Consumer Product	20	10
Properties	13	6
Finance	10	5
Construction	8	4
Plantation	6	3
Technology	4	2
IPC	1	1
Hotel	1	1
Total	**126**	**63**

TABLE 2
Number of amendments issued by each company

No. of amendments issued	No. of companies
Once	102
Twice	19
Trice	5
Total	**126**

TABLE 3
Distribution of amendments by quarter

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
No. of amendments	35 (22.6%)	23 (14.8%)	34 (21.9%)	63 (40.6%)	155

TABLE 4
Reasons for amendments

	Reasons of amendments	Frequency	Percent (%)
1.	Oversight	45	26.9
2.	Mistakes in mathematics	44	26.4
3.	Typographical error	40	23.9
4.	Incorrect use of existing facts	30	18.0
5.	Change in presentation	5	3.0
6.	Errors in application of the accounting principle	3	1.8
	Total	**167**	**100%**

TABLE 5
Composition of Audit Committees

Variables	Amend company		Control company		Total	
	Freq. (%)	Mean	Freq. (%)	Mean	Freq. (%)	Mean
AC Independence						
50% and less	5 (7.9%)		2 (3.2%)		7 (5.6%)	
More than 50%	58 (92.1%)		61 (96.8%)		119 (94.4%)	
Total	63	0.68	63	0.71	126	0.70
No. of experts						
0	0(0.0%)		2 (3.2%)		2 (1.6%)	
1	61(96.8%)		49 (77.8%)		110 (87.3%)	
2	2(3.2%)		11 (17.4%)		13 (10.3%	
3	0(0.0%)		1 (1.6%)		1 (0.8%)	
Total	63	1.03	63	1.17	126	1.10
No. of Meeting						
1-3	3(4.8%)		1 (1.6%)		4 (3.2%)	
4-6	57(90.4%)		55 (87.2%)		112 (88.8%)	
7-9	2(3.2%)		6 (9.6%)		8 (6.4%)	
10 and more	1(1.6%)		1(1.6%)		2 (1.6%)	
Total	63	4.86	63	5.14	126	5.0

TABLE 6
Descriptive statistics and T-test

	Amend companies		Control companies		T-test
	Mean	Std.Dev	Mean	Std.Dev	Sig.
INDAC	0.677	0.105	0.714	0.191	0.066*
NMEXPERT	1.03	0.177	1.17	0.493	0.032**
EXPERT	0.03	0.177	0.19	0.396	0.004***
MEET	4.86	1.635	5.14	1.83	0.357
BDSIZE	7.16	1.752	7.89	1.902	0.027**
COSIZE (LnAssets)	19.947	1.919	20.296	2.112	0.334
ROA	0.523	4.087	2.212	12.159	0.298
AUDIT	0.83	0.383	0.83	0.383	1.000

*Significant at 10 percent level
**Significant at 5 percent level
***Significant at 1 percent level

Where:
INDAC = Percentage of independent directors in the audit committee.
NMEXPERT = Number of financial experts in the audit committee.
EXPERT = "1" if there are two or more financial experts in the audit committee, and "0" if less than two.
MEET = Number of audit committee meetings in the financial year.
BDSIZE = Number of directors on the board.
COSIZE = Natural log of total assets.
ROA = Return on assets.
AUDIT = "1" if audited by Big 4, "0" otherwise.

TABLE 7
Pearson Correlation Coefficients (n=126)

	IND	EXPERT	MEET	BDSIZE	COSIZE	ROA	AUDIT
AMEND	-.164	-.253**	-.083	-.197	-.087	-.093	.000
INDAC		.110	.088	.137	.111	-.075	-.013
EXPERT			.117	.091	.219*	-.051	.096
MEET				.216*	.313**	.047	.133
BDSIZE					.226*	.070	.062
COSIZE						-.509**	.127
ROA							.069

* Significant at 5 percent level (2-tailed)
** Significant at 1 percent level (2-tailed)

TABLE 8 Logistic regression results

Cox & Snell R^2 = 0.126 , Nagelkerke R^2=0.169
Hosmer and Lemeshow goodness of fit statistic = 10.933 (p value = 0.206)

Variable	B	S.E.	Wald	Sig.
INDAC	-2.635	1.880	1.963	0.161
EXPERT	-1.823	0.806	5.111	0.024**
MEET	-0.013	0.138	0.010	0.922
BDSIZE	-0.158	0.112	1.965	0.161
COSIZE	-0.084	0.131	0.414	0.520
ROA	-0.038	0.031	1.481	0.224
AUDIT	0.281	0.500	0.316	0.574
Constant	4.759	2.714	3.075	0.080

**Significant at 5 percent level

Classification Table [a]

		Model's Predicted Amendment		
		Control Company	Amend Company	Percentage Correct
AMEND	Control Company	31	32	49.2
	Amend Company	17	46	73.0
Overall Percentage				61.1

[a] The cut value is .500

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