Regulatory Change and the Quality of Compliance to Mandatory Disclosure Requirements: Evidence from Bangladesh

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REGULATORY CHANGE AND THE QUALITY OF COMPLIANCE TO MANDATORY DISCLOSURE REQUIREMENTS: EVIDENCE FROM BANGLADESH

Abstract

The present study investigates the effectiveness of changes in the regulatory environment on the quality of compliance to mandatory disclosure requirements in Bangladesh. Statistical analysis of the Mandatory Disclosure Index, as developed in this paper using annual reports of the exchange-listed firms before and after the changes in the regulatory environment, shows a significant improvement in the quality of compliance during the more regulated time period. The size of the firm, the qualification of its accounting staff that prepares financial statements and the reputation of its auditing firm have significant positive impact on the quality of compliance. The analysis presented in the study point to two additional important findings: lack of profitability of the firm does not seem to affect the quality of its compliance, and the performance of domestic firms are at par with foreign affiliated firms as far as the quality of the compliance is concerned. The findings reported in the present study lend support to the conventional notion that well packaged and timed regulations can foster sustainable development in the overall reporting environment of a country.

Key Words: Bangladesh, Mandatory Disclosure, Financial Reporting, Annual Report, Corporate Attributes, Disclosure Index, Accounting Regulations, Compliance

REGULATORY CHANGE AND THE QUALITY OF COMPLIANCE TO MANDATORY DISCLOSURE REQUIREMENTS: EVIDENCE FROM BANGLADESH

1. INTRODUCTION & MOTIVATION

Changes in the regulatory environment, specifically in a developing country setting, often fail to produce the desired policy outcomes. Countries across the world are now more inclined to adopt the more complete version of the international accounting standards today than ever before. A key step in that process involves policy changes at the macro level with the hope of revamping the existing accounting practices of each individual firm. The improved accounting standards are expected to induce improvement in the overall accounting practice, which ultimately results in better regulatory compliance. Like most developing countries the quality of compliance to the disclosure requirements, in general, is poor in Bangladesh (Ahmed & Nicholls, 1994; Ahmed, 1996; Karim, 1995; Parry & Groves, 1990; Parry & Khan, 1984). Up until recently companies referred to the Companies Act of 1913 for guidelines on disclosure requirements. However, the country witnessed three major changes in the regulatory environment, as it relates to corporate financial reporting, during the period 1993-1997. First, the Securities and Exchange Commission (SEC) was established in 1993. Second, the Companies Act of 1994 (effective late 1995) was enacted replacing the century old Companies Act of 1913. Finally, the SEC extensively amended the 1987 Securities and Exchange Rules in 1997. While the Companies Act of 1994 spelled out the new disclosure requirements, crafted to suit the changed economic environment, the SEC focused on further formulation as well as enforcement of rules with the objective of raising the overall standard of corporate financial reporting with respect to compliance, comprehensiveness and reliability.

Against the back drop of these major regulatory changes at the macro level it is interesting to investigate whether the changes in accounting standards had any impact on the quality of compliance to mandatory disclosure requirements at the micro (firm specific) level in Bangladesh. Statistical analysis of the mandatory disclosure index, as developed in this paper using annual reports of the exchange-listed firms before and after the changes in the regulatory environment, show a significant improvement in the quality of compliance to the mandatory disclosure requirements during the more regulated time period. A multivariate analysis was conducted to investigate the firm specific attributes that contribute to the higher quality of compliance during the more regulated period. An interesting set of results comes out of this analysis. While size, the qualification of its accounting staff that prepares financial statements and the reputation of its auditing firm seem to contribute positively to the quality of compliance, the level of profitability of the firm does not. Furthermore, the performance of the domestic firms is at par with foreign affiliated firms as far as the quality of the compliance is concerned. The findings reported in the present study lend support to the conventional notion that well packaged and timed regulations can foster sustainable improvement in the overall reporting environment of a country.

The paper is organized as follows. Section 2 summarizes the important features of the three major changes in the regulatory environment as they relate to the compliance requirements in Bangladesh. Section 3 describes the data and the methodology used in the present study. It also includes explanation of variables used in the statistical analysis. Empirical results and the tests carried out on the multivariate model are reported in Sections 4. Finally, Section 5 contains concluding remarks.

2. MAJOR CHANGES IN THE REGULATORY ENVIRONMNET IN BANGLADESH: 1993-1997

A brief overview of the three major changes in the regulatory environment in Bangladesh during the years 1993-1997, as they relate to the compliance requirements, is presented below:

2.1. Establishment of the Securities and Exchange Commission, 1993

The Commission was established in 1993 under the provisions of the Securities and Exchange Ordinance 1969. The objectives of the Commission as laid down in the SEC Act 1993 are to protect the interests of investors in securities, to regulate and develop securities markets, and to ensure proper issuance of securities. The Commission, in later years, reached an understanding with the Institute of Chartered Accountants of Bangladesh (ICAB) to monitor the application of the International Accounting Standards (IASs) and International Standards on Auditing (ISAs) in the preparation of financial statements and auditing procedures of listed companies. The SEC does not have any disclosure requirements of its own, as does the US SEC in the form of 10-K reports. However, they have the authority to impose penalties on companies for publishing misleading information or for not complying with general accounting and reporting requirements set out by the law.

2.2. The Companies Act 1994

The Companies Act 1994 is the cornerstone in the regulatory framework for companies in Bangladesh. The Act was modelled on the British Act of 1908 and was originally enacted as the Indian Companies Act 1913. After the partition of British India the Companies Act of 1913 was eventually adopted in Pakistan in 1949 and subsequently, in Bangladesh (the split away eastern part of Pakistan) in 1972. The accounting provisions in the 1913 Act were 'seriously out of date' (Parry and Khan, 1984) and hence were limited to very minimum disclosure by companies. Consequently, this Act was replaced in 1994 with the Companies Act 1994. Notable new disclosure requirements set forth by the 1994 Act include disclosure of productive capacity and actual output; number of employees earning annual salary of Tk 36,000 and above; material changes and commitments, if any, that occurred after balance sheet date; brief description of the nature of activities; changes in the nature of business of the company or its subsidiaries or in the classes of businesses in which the company has an interest; information and explanation on any reservation, qualification, or adverse remark in the auditor's report; assets acquired on hire purchase; details of investments including market value of quoted investments; debts due to associated companies; maximum of debt due by directors or officers of the company; repayment terms, nature of security, and interest rate of long-term debt; restricted cash; debts due in less than 6 months and due in 6 months or more; quantities of sales for each class of goods; raw materials consumed; value and quantity of beginning and closing inventory; value and percentage of imported and local raw materials and parts; value of imports on CIF basis; amount of foreign exchange earned on FOB basis; amount spent in foreign exchange to procure management advisory services; number of non-resident shareholders; restriction on title of assets; and amounts paid to the auditor for auditing and management advisory services.

2.3. The Securities and Exchange Rules (SER) 1987 & the subsequent amendments in 1997

The accounting provisions of the SER (1987 & 1997) apply to exchange-listed companies. While the SER 1987 contains detailed disclosure requirements, extensive amendments were made to it in 1997. Some of the most important features of the SER 1987 include specification of detailed requirements and guidelines for the preparation of the balance sheet and the profit and loss account (income statement); audit of the above financial statements by a chartered accountant (CPA) and the format of the auditor's report; furnish copies of the annual report to the shareholders at least fourteen days before the Annual General

Meeting (AGM), to the stock exchange and to the government. On the other hand, the major amendments contained in the SER in 1997 include requiring listed companies to publish cash flow statements, as per the prescribed format, in their annual reports; publish half-yearly financial statements within one month of the close of the first half-year, audited or otherwise; requiring preparation of financial statements of listed companies in accordance with the IASs as adopted by the ICAB; requiring compliance to the ISAs as adopted by the ICAB in addition to complying with applicable local GAAP.

3. DATA & METHODOLOGY

3.1. DATA

The years 1991 and 1998 were used to proxy for the less regulated and the more regulated environments respectively. A total of 138 companies, of which 12 are financial institutions, were listed at the Dhaka Stock Exchange (DSE) in 1991. Of the 126 non-financial DSE-listed companies, 109 companies published their 1991 annual reports. The 1991 annual reports for 5 other companies were not available while 7 companies stopped trading at different times between 1991 and 1998.[1] Therefore, at the time of collecting data for the present study, a total of 97 companies were relevant for the study. However, 8 of these 97 companies did not publish their 1998 annual reports as of the end of 2001, which was the cutoff period for this study. In addition, the 1998 annual reports of three other companies were not available. Consequently, the present study is based on 86 matched pairs of companies under the less regulated (1991) and the more regulated (1998) environments in Bangladesh. In the final sample of 86, 7 companies are local subsidiaries of multinational enterprises and the remaining 79 are publicly owned domestic companies. All the relevant data for years 1991 and 1998 was collected from Annual Reports of the listed companies (from the DSE & SEC libraries) and the Members Handbook published by the ICAB (the ICAB library).

3.2. METHODOLOGY

3.2.1. Development of the Mandatory Disclosure Index

The Mandatory Disclosure Index (MDI) was developed, following the path-breaking study by Cerf (1961), by including all information items whose disclosure was mandatory under the two regulatory regimes – the less regulated environment (1991) and the more regulated environment (1998). The mandatory disclosure requirements during the two regulatory regimes were different. Therefore, the 1991 sub-sample was measured against disclosure items that were mandatory in 1991 while the 1998 sub-sample was measured against items that were mandatory in 1998. The 1991 MDI is based on the information items whose disclosure was mandatory under the Companies Act 1913 and the SER of 1987. The mandatory disclosure requirements of these two pieces of legislations were strictly limited to minimum disclosure. Consequently a search of mandatory items under the less regulated regime produced a short list of just 22 items. The 1998 MDI is based on the Companies Act of 1994 and the 1997 amendment of the 1987 SER. These two pieces of legislation require companies to disclose greater number of items during the more regulated environment and therefore, a search of mandatory items under the former produced a short list of 57 items.[2]

Since the two sub-samples were measured against two disclosure indices, a relative, rather than absolute, measure of disclosure was considered appropriate. Disclosure was operationally defined as the appearance of an item of information in the annual reports of the sample companies. A company was awarded a score of 1 if an item is relevant to the company and was disclosed and 0 if the item was relevant but not disclosed.[3] The MDI for a company, under each regulatory regime, was thus the total number of mandatory items disclosed by the company divided by the total number of items from the respective disclosure indices that applies to the company. A rise (drop) in the MDI so constructed can therefore be taken to mean higher (lower) quality of compliance. This variable, MDI, is used as the dependent variable in the multivariate analysis discussed below.

3.2.2. Multivariate Analysis

3.2.2.a. The Model

The following multiple linear regression model is used to investigate the association between regulatory changes and quality of compliance to mandatory disclosure requirements in Bangladesh:

$$MDI = \alpha + \beta_1 YR + \beta_2\, QSA + \beta_3\, AR + \beta_4\, LVG + \beta_5\, SZE + \beta_6\, MNA + \beta_7\, PRFT$$

If the quality of compliance to the mandatory disclosure requirements is better in 1998 from that of in 1991 then the coefficient of β_1 should come out with a significantly positive sign. The variable is coded 1 if the firm observation is in 1998 and 0 for 1991. Other explanatory variables were picked based on careful reading of the relevant literature on the disclosure behavior within the context of both developed and developing countries. The model above was subjected to the usual tests for multicollinearity (variance-inflation-factor, VIF), heteroskedasticity (White test) and stability (Chow test).

3.2.2.b. Description of the Explanatory Variables[4]

Qualification of the staff accountants employed by the firm (QSA)

The qualification of the accountants may be seen as an important determinant of compliance to mandatory disclosure requirements because a higher degree of compliance can be expected from the financial statements prepared by professionally qualified accountants compared to those by unqualified accountants. Surprisingly, Parry and Groves (1990) reported no significant difference in the quality of disclosure between firms employing professionally qualified accountants and firms not employing them in the context of Bangladesh. However, a later study by Ahmed and Nicholls (1994) found that the qualification of the principal accounting officer of the reporting company did influence the disclosure levels. With the higher mandatory disclosure requirements, due to the change in regulatory environment, it would be interesting to check whether the number of qualified accounts employed by the firms contributed to the level compliance. The variable is captured by a dummy variable, which has the value of 1 if the company employed one or more chartered accountant(s) and 0 otherwise.

Auditors' reputation (AR)

The reputation of the auditors of a firm can be expected to play a critical role on the quality of its compliance to financial disclosure requirements. Empirical evidence, both in the developed and developing country context, generally show that auditors' reputation affects the audit quality and thereby, the quality of compliance. While several studies (Cerf, 1961; Singhvi & Desai, 1971; Benston, 1980; DeAngelo, 1981; Wright, 1983; Craswell & Taylor, 1992; Ahmed & Nicholls, 1994; Raghunathan et al., 1994; Patton & Zelenka, 1997, Archambault and Archambault, 2003 and Owusu-Ansah and Yeoh, 2005) confirmed this hypothesis other studies reported no association between auditors' reputation and the quality of compliance to financial disclosure requirements (Firth, 1979; Raffournier, 1991; and Wallace et al., 1994). Since Ahmed and Nicholls (1994) show this variable to have a significant impact on the quality of compliance to mandatory disclosure requirements in Bangladesh under the less regulated environment (1988) we thought it would be interesting to follow up on it under the more regulated environment (1998). Firms that audited exchange-listed stocks during the years 1991 and 1998 were divided into ‘big’ and ‘small’ firms with the size of the audit firm taken a proxy for its reputation. Audit firms having four or more chartered accountants (including partners) and affiliation of international big or non-big firms were treated as 'big' or otherwise ‘small.’

Leverage (LVG)

One would expect a positive association between leverage and the quality of compliance given the constant monitoring by creditors of the firm. While empirical evidence shows such a positive association in developed country settings (Robbins & Austin, 1986) the evidence on developing countries (Chow & Wong-Boren, 1987; Ahmed & Nicholls, 1994) shows no significant association between leverage and disclosure levels. Despite the insignificance of the variable LVG reported in Ahmed & Nicholls (1994) for Bangladesh we took this variable into consideration since the debt-equity mix of firms is unlikely to remain constant over time. Moreover, the number of securities listed on the DSE has more than doubled and DSE’s market capitalization has quadrupled in the years following the publication of that study. In the present study the debt-equity ratio was selected to proxy for leverage of the firm.

Size (SZE)

Size of the firm is the most widely used variable in the extant literature to explain its disclosure levels. With a few exceptions (Stanga, 1976; Spero, 1979) most empirical studies (Cerf, 1961; Singhvi & Desai, 1971; Firth, 1979; Wallace, 1988; Cooke, 1989a & 1989b; Wallace et al., 1994; Inchausti, 1997; Owusu-Ansah, 1998) found that corporate size significantly explains disclosure levels and variability. In the present study logarithm of sales is used to proxy for firm size.

Multinational affiliation (MNA)

Subsidiaries of multinational firms operating in developing countries are expected to disclose more information and observe higher reporting standards compared to the domestic counterparts for a number of reasons. First, they have to comply with the regulations of not only the host country but also the parent company where, in general, substantially higher standards of accounting and reporting are maintained. Second, they are usually equipped with more competent and better trained management/accountants and are more likely to have sophisticated accounting systems in place and so, they have the ability to disclose more information without incremental processing costs. Third, they are under closer scrutiny by various political and pressure groups within the host country who view them as sources of economic exploitation (Ahmed and Nicholls, 1994). Consequently, these companies are inclined to disclose more information in order to avert any pressure for excessive control or achieve socio-political legitimacy. Ahmed and Nicholls (1994) reported multinational affiliation of a company to be the most significant variable explaining disclosure levels in Bangladesh.[5] The variable MNA, in the present study, is operationalized by means of a dummy variable with a value of 1 for companies with multinational affiliation and 0 for the domestic companies.

Profitability (PRFT)

The state of the profitability of the company can be expected to affect the quality of disclosure in both developed and developing countries. Empirical studies, in general, report positive association between profitability and disclosure (Cerf, 1961; Singhvi, 1968; Singhvi & Desai, 1971; Wallace & Naser, 1995; Inchausti, 1997; and Owusu-Ansah, 1998).[6] In the present study the ratio of net profit to sales is taken to proxy for profitability.

4. TESTS OF THE REGRESSION MODEL AND EMPIRICAL RESULTS

4.1. EMPIRICAL RESULTS

The descriptive statistics for the explanatory and dependent variables are presented in Table 1. The number of qualified accountants employed by the firms seems to have increased during the more regulated environment. Also, more companies seem to have used increased leverage and engaged auditing firms, with better reputation, for auditing their accounts while the profitability seem to have declined during the more regulated environment.

[TABLE 1 ABOUT HERE]

The correlation matrix reported in Table 2 shows that all but two of the explanatory variables used in the model have significant and positive correlations with the dependent variable – MDI. The correlation coefficients reported in Table 2 reveal that the correlation coefficients are in line with the expected signs of the explanatory variables. Also, Table 2 shows that some pairs of explanatory variables have significant correlations between them e.g., correlation between QSA and AR is 0.354, between QSA and SZE is 0.392, between QSA and MNA is 0.378 and finally, between QSA and PRFT is 0.251. Significant correlations also appear to exist between AR and SZE (0.235), between AR and MNA (0.459), between LVG and PRFT (-0.304), and between SZE and MNA (0.341). Significant negative correlation between leverage and profitability makes sense in the context of Bangladesh where profitability of highly levered firms appears to be, in general, poor. Although the presence of significant correlations between these pairs of explanatory variables tends to indicate potential multicollinearity problem in the model it may be noted here that the specific tests of multicollinearity, as reported in Section 4.1, do not suggest any serious multicollinearity problem.

[TABLE 2 ABOUT HERE]

The primary objective of the multivariate analysis is to identify the effect of the variable YR on the quality of mandatory disclosure compliance after controlling for the possible effects of relevant corporate attributes. It was found that the year of data (YR) representing regulatory changes during 1993 to 1997, firm size (SZE), qualification of the staff accountants employed by the firm (QSA) and auditors' reputation (AR) are significantly associated with the extent of mandatory disclosure compliance. The significance of the variable YR implies that the extent or quality of compliance to mandatory disclosure requirements has increased under the more regulated environment (1998) compared to that under the less regulated environment (1991). While the reported significance of the variable QSA contradicts the findings of Parry and Groves (1990) it is line with the evidence reported in a more recent study by Ahmed and Nicholls (1994) on Bangladesh. On the other hand, leverage (LVG), profitability (PRFT) and specifically, multinational affiliation (MNA) are found not to have any statistically significant bearing on the extent or quality of mandatory disclosure compliance. The sign and insignificance of the variable LVG, reported in the present study, is in agreement with the extant literature on developing countries. The reported lack of significance of the variables PRFT and specifically, MNA is equally important as it implies that domestic and not so profitable firms comply at the same level as multinational subsidiaries and profitable companies respectively under the more regulated environment.[7] Previous studies on accounting environment in

Bangladesh by Parry and Groves (1990) and Ahmed and Nicholls (1994) reported that the disclosure level of the multinational firms was consistently higher than that of the domestic firms. Therefore, the lack of significance of the variables PRFT and MNA could be taken to imply an overall sustainable improvement in financial reporting standard under the more regulated environment.

[TABLE 3 ABOUT HERE]

4.2. TESTS OF THE REGRESSION MODEL

The model developed in this study has been tested for multicollinearity, heteroskedasticity, and stability. The tests and the corresponding results are presented below:

Tests for multicollinearity

Two tests for multicollinearity were performed. The first test involves computing the ratio r_{ij}/R_y, where R_y represents the multiple correlation coefficient and r_{ij} is the zero-order partial correlation coefficients between all pairs of explanatory variables (Haitovsky, 1969). A high value of r_{ij} and therefore, a ratio of $r_{ij}/R_y > 1$ represents a high degree of collinearity. The computations indicate non existence of multicollinearity problem in the data as none of the values exceeded 1. The second test involves checking the variance inflation factors (VIF) and condition numbers. Again, this test also suggests non-existence of any serious multicollinearity problems.

Tests for heteroskedasticity

If the residuals of a regression model are found to follow certain trend instead of having a constant variance, heteroskedasticity problem is said to exist. The following four tests for detecting heteroskedasticity are undertaken:

(i) The standardized, non-standardized, and studentized residuals are plotted in histograms and all of them seem to be normally distributed.

(ii) The observed residuals are plotted against the expected probability plot and the observed residuals seem to follow the expected normal probability line.

(iii) The residuals are plotted against predicted values and all the continuous explanatory variables and there was no suggestion of any trend in the resultant scatter plots.

(iv) Finally, a more formal White's test is carried out to detect heteroskedasticity. The White's test involves regressing the squared residuals on the explanatory variables, their squared forms, and their joint products. The significance coefficient of the F statistics determines if the hypothesis of homoskedasticity can be rejected and the hypothesis of homoskedasticity could not be rejected for the model used in the present study.

Tests for stability

The stability of the model is tested using Chow test, which involves splitting the sample into two sub-samples and running the regressions separately for both the sub-samples. In the present study, the sample was divided into two sub-samples on the basis of the median of the variable SZE, and the regressions were run for both of them. No significant difference was found in the significant and insignificant variables across the sub-samples. Therefore, the results can be expected to remain valid across samples of companies from the same population.

5. CONCLUDING REMARKS & POLICY IMPLICATIONS

The present study investigates the impact of changes in the regulatory environment on the extent or quality of the compliance to mandatory disclosure requirements in Bangladesh. A multivariate analysis, using firm specific data under both the less regulated and the more regulated environments, was conducted for the purpose. The results reported in the present study indicate that overall reporting environment in Bangladesh improved significantly during the more regulated years. This is in a way consistent with the findings of Owusu-Ansah and Yeoh (2005) who find improvement in corporate disclosure compliance behaviour as a result of the implementation of the Financial Reporting Act 1993 in New Zealand. The implication of the present study is two fold. From the end-user perspective it means that both analysts and investors may attach more importance to the linkage between the quality of compliance of a firm to the disclosure requirements and the size of the firm, the qualification of the staff accountants it employs and the reputation of the firm that audits it under the more regulated environment. From the perspective of the regulators it means that it is possible to bring up the standards of compliance at the firm level by making policy changes at the macro level which, in turn, should be very reassuring when considering, debating and crafting policy changes geared towards the adoption of the more complete version of the International Accounting Standards (IASs) and the International Standards on Auditing (ISAs) in different countries around the globe. The study documents that more comprehensive disclosure requirements can lead to higher, rather than lower, levels of compliance as long as regulation is carefully designed and strictly enforced.

NOTES

1. All these securities were de-listed from the Exchange by the end of 1998.
2. Note that some of the items under the less regulated environment (1991) could be split into a further number of items. For example, the income statement and balance sheet are considered as one item each in the 1991 MDI while the two items are broken down into several items in the 1998 MDI.
3. The issue of relevance of an item to a company was established by a thorough reading of the annual reports of the sample companies for the years 1991, 1992, 1997, and 1998.
4. The variable QSA was estimated using information from the Members Handbook published by the ICAB while all the other explanatory variables were estimated using respective Annual Reports.
5. Wallace (1987) and Owusu-Ansah (1998) reported similar evidence for Nigeria and Zimbabwe respectively.
6. Belkaoui and Kahl (1978) report a negative association between profitability and disclosure in Canada.
7. The decline in the MNA firms under the more regulated environment is due to the takeover of couple of MNAs by local companies.

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Table 1
Summary Statistics of Variables

Panel A: Less Regulated Environment (1991)

Variable		Mean	Median	SD	Min.	Max.
QSA	Qualification of the staff accountants	0.279	0.000	0.451	0.000	1.000
AR	Auditors' reputation	0.291	0.000	0.457	0.000	1.000
LVG	Leverage	2.800	1.880	3.176	0.000	16.580
SZE	Size	1.991	2.009	0.624	0.780	3.950
MNA	Multinational Affiliation	0.093	0.000	0.292	0.000	1.000
PRFT	Profitability	0.010	0.031	0.126	-0.433	0.514
MDI	Mandatory disclosure index	0.752	0.773	0.075	0.550	0.910

Panel B: More Regulated Environment (1998)

Variable		Mean	Median	SD	Min.	Max.
QSA	Qualification of the staff accountants	0.384	0.000	0.489	0.000	1.000
AR	Auditors' reputation	0.302	0.000	0.462	0.000	1.000
LVG	Leverage	3.353	1.696	6.636	-18.840	39.400
SZE	Size	2.147	2.225	0.725	0.300	4.260
MNA	Multinational Affiliation	0.070	0.000	0.256	0.000	1.000
PRFT	Profitability	0.002	0.035	0.169	-0.840	0.380
MDI	Mandatory disclosure index	0.849	0.886	0.119	0.530	1.000

Table 2
Correlation Matrix

	QSA	AR	YR	LVG	SZE	MNA	PRFT	MDI
QSA	1.000							
AR	0.354*	1.000						
YR	0.111	0.013	1.000					
LVG	-0.023	-0.034	0.053	1.000				
SZE	0.392*	0.235*	0.116	-0.064	1.000			
MNA	0.378*	0.459*	-0.043	-0.119	0.341*	1.000		
PRFT	0.251*	-0.025	-0.026	-0.304*	0.110	0.118	1.000	
MDI	0.385*	0.324*	0.440*	-0.091	0.449*	0.269*	0.105	1.000

Note:
(1) * indicates significance at the 1% level (2-tailed).

Table 3: Regression Results

$$MDI = \alpha + \beta_1 YR + \beta_2\, QSA + \beta_3\, AR + \beta_4\, LVG + \beta_5\, SZE + \beta_6\, MNA + \beta_7\, PRFT$$

Dependent variables	Expected Sign	β Coefficient	*t* value
QSA	+	.031	1.901***
AR	+	.043	2.602**
YR	+	.089	6.794*
LVG	-	-.001	-.925
SZE	+	.046	4.325*
MNA	+	.018	.646
PRFT	+	.024	.501
Intercept		.640	28.564
Adjusted R^2		.416	
F		18.268	

Notes:

(1) * indicates significance at the 1% level.

(2) ** indicates significance at the 5% level.

(3) *** indicates significant at the 10 % level.

Appendix 1
List of Mandatory Disclosure Items: 1991

1. Amount and sources of revenue for the period
2. Total of property, plant and equipment including its composition at the end of the period
3. Income statement
4. Total current assets including its composition
5. Methods used in the valuation of inventories
6. Balance sheet
7. Total current liabilities at the end of the period
8. Amount and breakdown of operating expenses
9. Total equity shareholders' interests and number of equity shares issued
10. Amount of depreciation for the period
11. Amount of inventory at the end of the period
12. Contingent liabilities at the end of the period
13. Number of authorized or unissued equity
14. Amount of income tax expense for the period
15. Audit report
16. Reported capital expenditure (additions to physical facilities) for the period
17. Cost of goods sold for the period
18. Number and amount of debentures and convertible bond or loan stocks outstanding at the end of the period
19. Allowance for doubtful debts
20. Declaration by directors of the faithfulness of accounts reported
21. Method used in the valuation of marketable securities
22. Underwriting expenses and method used in its amortization

Appendix 2
List of Mandatory Disclosure Items: 1998

1.	The working result of the company during the period.
2.	Auditor's report.
3.	Information and explanation on every reservation, qualification or adverse remark in the auditor's report.
4.	Cash Flow Statement.
5.	Retained Earnings Statement
6.	Gross profit for the year.
7.	Net profit for the year.
8.	Legal form of the enterprise.
9.	Nature of business activities.
10.	Fundamental accounting assumptions.
11.	Mode of valuation of fixed assets.
12.	Inventory valuation method.
13.	Method used to account for foreign currency transactions.
14.	The amount of charge for income tax.
15.	Share capital: Authorised, Issued, Subscribed, Called up and Paid up.
16.	Total fixed assets and its composition.
17.	Method of depreciation.
18.	Original cost of each fixed asset.
19.	Additions to fixed assets during the year.
20.	Amount of depreciation for the current year.
21.	Amount of accumulated depreciation on property, plant and equipment at the end of the period.
22.	Current assets and its composition.
23.	Details of advance and prepayments made.
24.	Long-term secured loans payable
25.	The rate of interest on long-term secured loans.
26.	Terms of repayment of long-term debt.
27.	Current portion of long-term loans.
28.	Interest on loans paid during the year.
29.	Details of bank overdraft (amount and bank).
30.	Current liabilities and its composition.
31.	Aggregate amount of sales.
32.	Amount of sales in respect of each class of goods.
33.	Quantities of sales in respect of each class of goods.
34.	Amount of opening stock of raw materials.
35.	Quantity of opening stock of raw materials.
36.	Amount of closing stock of raw materials.
37.	Quantity of closing stock of raw materials.
38.	Amount of beginning work-in-progress.
39.	Amount of ending work-in-progress.
40.	Amounts of opening stock of finished goods for each class of goods (for manufacturing companies).
41.	Quantity(ies) of opening stock finished goods for each class of goods (for manufacturing companies).
42.	Amounts of closing stock of finished goods for each class of goods (for manufacturing companies).
43.	Quantity(ies) of closing stock finished goods for each class of goods (for manufacturing companies).
44.	Amounts of purchases for each class of goods (for trading companies).
45.	Quantity(ies) of purchases for each class of goods (for trading companies).
46.	Value and percentage of all imported and local raw materials,

	spare parts and components consumed.
47.	Remuneration paid or payable to directors.
48.	Remuneration paid or payable to Managing Director.
49.	Amount paid to auditors for audit services
50.	Information regarding installed capacity.
51.	Information regarding actual production.
52.	Foreign exchange earnings from export of goods (FOB prices).
53.	Contingent liabilities.
54.	Mode of valuation of investments (if any).
55.	Separate disclosure of staff remuneration exceeding Tk. 36,000.
56.	Information on provident funds (superannuation schemes).
57.	Information on employees' profits participation fund.

Appendix 3
List of Companies Included in the Matched Pair Sample

1	Aftab Automobiles	44	Specialized Textile Mills
2	Aziz Pipes	45	Stylecraft
3	Olympic Industries	46	Rahim Textiles
4	Bangladesh Lamps	47	Quasem Silk Mills
5	Bengal Steel	48	Saiham Textile Mills
6	Eastern Cables	49	Modern Dyeing
7	Karim Pipes	50	Eagle Star Textiles
8	Munno Jutex	51	Desh Garments
9	Munno Jute Stafflers	52	Dulamia Cotton Mills
10	Singer Bangladesh	53	Tallu Spinning Mills
11	Atlas Bangladesh	54	Tamijuddin Textile Mills
12	Bangladesh Autocars	55	Padma Textile Mills
13	Quasem Drycells	56	Ambee Pharmaceuticals
14	Renwick Jajneswar	57	Beximco Pharmaceuticals
15	National Tubes	58	Glaxo Wellcome (Smithkline)
16	Bangladesh Thai Aluminium	59	ACI Limited
17	Alpha Tobacco	60	Petro Synthetic Products
18	Amam Seafood	61	Pharmaco International
19	Apex Food	62	Reckitt & Colman
20	Bangas Biscuit	63	Therapeutics Bangladesh Limited (TBL)
21	Bangladesh Leaf Tobacco	64	Pharma Aids
22	British American Tobacco	65	The Ibn Sina Pharmaceuticals
23	EL Camellia	66	Rahman Chemical
24	National Tea Company	67	Bangladesh Chemical Industries Limited (BCIL)
25	Zeal Bangla Sugar Mills	68	Wata Chemical
26	Rupon Oil	69	Eagle Box and Carton
27	Chittagong Vegetables	70	Bangladesh Monospool Paper
28	Bangladesh Plantation	71	Paper Processing
29	Hill Plantation	72	Bangladesh Hotels
30	Shyampur Sugar Mills	73	Bangladesh Services
31	BOC Gases	74	Apex Tanneries
32	Padma Oil	75	Aramit Limited
33	Eastern Lubricants	76	Bata Shoe
34	Islam Jute Mills	77	G Q Ball Pen Industries
35	Jute Spinners	78	Munno Ceramic Industries
36	Mutual Jute Mills	79	Usmania Glass Sheet
37	Northern Jute	80	The Engineers
38	Sonali Aansh	81	Modern Industries
39	Ahad Jute Mills	82	Savar Refractories
40	Alhaj Textile Mills	83	BEXIMCO
41	Ashraf Textile Mills	84	Chittagong Cement
42	GMG Industrial Corporation	85	Himadri
43	Quasem Textile Mills	86	Texpick Industries