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Disclosure in Annual Reports of Listed Companies: The Case of India

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Abstract – Accounting in the form of financial disclosure is helpful for economic development of a country. This study reports the results of an empirical investigation of the disclosure behavior of listed companies in India .It also reports the relationship between aggregate disclosure (both mandatory and voluntary) and a number of company characteristics for Indian companies listed in Bombay Stock Exchange (BSE). The results of the study revealed that there was a significant increase in the level of aggregate disclosure (its average was 85%) compared to previous studies in India. The extent disclosure was 73% in previous studies. Univariate analysis revealed that Leverage (LV), Firm Size (FS), listing status (LS), audit firm size (AS) and company age are significant variables in explaining the variation in the level of aggregate disclosure among Indian companies. Meanwhile, multivariate analysis showed profitability (ROE), audit firm size (AS) to be significantly associated with the level of aggregate disclosure.

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1. INTRODUCTION

India is developing into an open-market economy. The economy of India is the fourth largest in the world as measured by GDP (purchasing power parity) of US $4.761 trillion and Industrial production growth rate: is 3.1% with 85th position in the world in the annual percentage increase in industrial production which includes manufacturing, mining, and construction (World Fact Book, 2012) . A good corporate disclosure can help a country for strong economy.

2. IMPORTANCE OF CAPITAL MARKET AND ECONOMIC GROWTH AND FINANCIAL DISCLOSURE

Capital is required for economic development of country .Capital information in the form of domestic capital formation, foreign direct investment and foreign aid is necessary to increase gross national product (GNP). Therefore in all developing countries like India a high rate of capital information is aimed to achieve objective of development plans. Financial intermediaries such as banks and financial institution are needed to channelize saving and attract foreign investment to accelerate economic growth.

The growth of capital market is a prerequisite to stimulate and guide capital formation. Capital market helps in encouraging investment and providing vitality and dynamism to corporate organization in the country. An efficient capital market helps the investor and capital providers in getting information about investment opportunity making sound investment decision and to diversify and reduce risk.

Accounting plays a vital role in creating and sustaining the level of confidence needed for the success of capital market in a developing country. An adequate accounting system possessing the reliability and accuracy of the financial statement of business enterprises provides right climate of confidence for the functioning of capital markets.

The efficiency of capital markets capital, capital formation, efficient allocation of resources and economic development depend on the availability of financial information and financial reporting policies. Figure1 shows the relationship among financial information disclosure, capital market efficiency and economic growth.

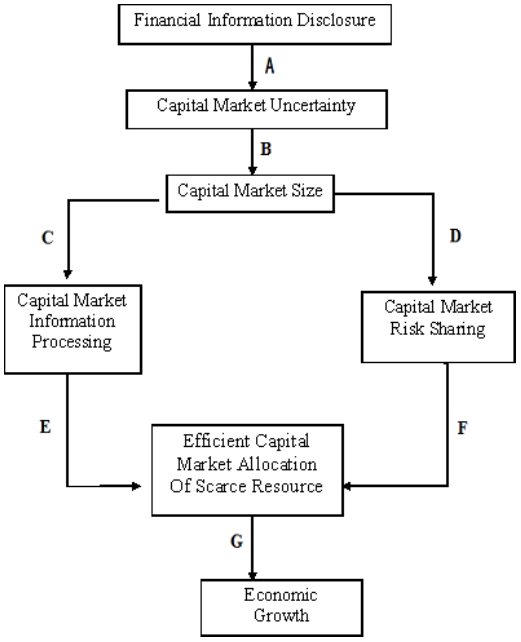

Fig. 1 The role of Information in economic growth

Source: Gordian A . Ndubizu, : Accounting Disclosure Methods and Economic Development : A Criterion for Globalizing Capital Markets", International Journal of Accounting Education and Research 27,2(1992), p. 153.

A. Accounting information disclosure minimizes the capital market uncertainty. This is accomplished through the disclosure of the value and risk of each asset traded on the capital market.

B. The reduced capital market uncertainty encourages more investors to buy and sell securities in the capital market. It has been documented that higher capital market uncertainty induces security buyers to under price high-quality security. Consequently the seller of such security will withdraw from the market, which reduces the size of the market.

C. The capital market size affects both the market information processing (denoted C) and risk

D. Sharing (denoted D). Other things being equal, the larger the capital market, the more efficient is the information processing. '^-'^

E. The capital market information processing generates the security prices. The security prices effect the ability of the capital market to efficiently allocate scarce resources (denoted E).

F. The larger the marked portfolio, the smaller the market risk per asset is and the easier it is for investors to hold/purchase an efficient portfolio of securities. Fama (1978) argues that the idiosyncratic risk can be diversified away in a large and efficient capital market. Lower market risk implies lower cost of capital since investors want a rate of return commensurate with the level of perceived risk. The optimal risk sharing leads to an efficient allocation of savings (denoted F).

G. The capital market helps in the development of savings which effect economic growth through investment. "The capital market transfers the accumulated savings to the most efficient investment opportunity. This function of the capital market stimulates economic growth.

Figure 1 indicates the relationship among financial information disclosure, capital market efficiency, and economic growth. It is clear from above discussion that accounting in the form of corporate financial disclosure plays a vital role for economic development in any country.

3. ENVIRONMENTS OF FINANCIAL REPORTING IN INDIA

Corporation law in India has a colonial heritage. Previous Indian Companies Acts were similar to the British Companies Act, but contained sections relating to problems peculiar to India (Marston, 1986). The Companies Act of 1956 contains the chief requirements relating to financial reporting.

August 2013 marks a historic moment and the beginning of a new era for corporate India. The new Companies Bill has been passed by both the Houses of Parliament and signed by President of India. The new Act is a historic piece of legislation aimed at improving transparency and accountability in India's corporate sector. The new Companies Act will give this country a modern legislation, which will contribute to the growth and development of the corporate sector in India. The Act, when enacted, will allow the country to have a modern legislation for regulation of corporate sector in India. The Act, amongst other aspects provides for business friendly corporate regulation / pro-business initiatives, e-governance initiatives, good corporate governance, Corporate Social Responsibility (CSR), enhanced disclosure norms and accountability of management, stricter enforcement, audit accountability, protection for minority shareholders, investor protection and activism and better framework for insolvency regulation and institutional structure (deloitte , 2013).

India (SEBI) formed under the SEBI Act of 1992. The SEBI was set up as an administrative body in 1988 and was given statutory status on 30 January 1992 by promulgation of the SEBI Ordinance, which has since become an Act of Parliament. The principal objectives of SEBI are to protect the

interests of investors in securities and to promote the development of, and to regulate, the securities market through appropriate measures (G. Sabarinathan , 2010).

Capital markets in India comprise equity, debt, foreign exchange and derivatives markets. India has the number one ranking in terms of listed securities on the Exchanges, followed by the USA (NSE, 2004). As at the end of March, 2004, there were 9,368 trading members registered with SEBI with 10,100 companies listed (Annual Report of SEBI, 2004). There are 23 stock exchanges in India, the two major ones being the Bombay Stock Exchange (now called The Stock Exchange, Mumbai, hereafter BSE), and the National Stock Exchange (NSE). The BSE is the oldest stock exchange in Asia established in 1878. Listed companies must comply with the rules and regulations prescribed by the Securities and Exchange Board of India Act 1992.

The disclosure requirements of accounting are addressed usually in company laws, tax laws, securities and exchange laws. In India, registration of and licenses to professional accountants are issued by the ICAI. Accounting standard setting agencies and professional accounting bodies ICAI are involved in setting accounting standards and audit standards and have exerted considerable influence on the development of financial reporting and regulation.

4. LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

Accounting researchers have investigated relationships between corporate characteristics and disclosures in corporate annual reports since 1960s. Early works on this subject was pioneered by Fremgen et al. (1963) and afterwards, many studies have examined the quality of information disclosures in various contexts. Examples of such studies are: Owusu- Ansah (1998); Naser and Nuseibeh(2003); Akhtaruddin (2005) and Ofoegbu and Okoye (2006). Each of these studies has been distinguished by differences in research setting, differences in definition of the explanatory variables, differences in disclosure index construction and differences in statistical analysis.

Prior studies (Singhvi, 1968; Singhvi and Desai, 1971; Prencipe, 2004; Akhtaruddin, 2005; Daske and Gebhardt, 2006; Iatridis, 2008; Barako, 2006, Dahawy and Conover, 2007) show that disclosure levels are associated with some company characteristics. Similar research methods, in particular the regression models are observed to have been used by these researchers in different contexts. It is also observed that the results of the empirical studies vary from country to country. This is principally due to the unique business environment attributable to each country of study. So extent of disclosure in annual reports varies from company to company as revealed by the empirical results. The assumption here is that the extent of disclosure in annual reports is not an independent variable, rather it is likely to be influenced by several company specific factors. It is generally argued that knowledge of the relationship between the extent of disclosure and the company characteristics would facilitate in formulation of the appropriate corporate disclosure policies. To quote Buzby (1975) 'to the degree that the extent of disclosure in some, if not all, annual reports is considered inadequate, some purposeful action must be taken. Knowledge of the relationship between the extent of disclosure company characteristics would play a role in selecting a proper course of action' In short, the identification of factors influencing the extent of disclosure would help corporate managements, regulators, investors and other interested groups in taking a proper course of action in their respective area of decision making. Hence the researcher has made an attempt to identify and determine the extension which corporate attributes influence the extent of disclosure in corporate annual reports. The researchers examine corporate characteristics that are used as predictors of the quality of disclosure. The most popular characteristics are corporate size, profitability, liquidity, gearing, audit size, listing status, multinational parent, age, and ownership structure.

There have been little studies in India about corporate disclosure and different research findings. In recent study shows that although there have been a marked improvement in the quantity and quality of information provided in the financial statements by the Indian companies over the years, there exists still some diversity in their reporting practices. Thus, more efforts should be put to unearth the unexplored area of accounting and reporting within the network of statutory requirement with a view to reducing the diversity and ambiguity in their disclosure and hence enhancing the quality, reliability, comparability and comprehensibility of accounting information (Pintu Sarkar 2011).

The present study has explored the relationship between the extent of disclosure in annual report of Indian company and select company characteristics for a sample of 20 Indian companies. The companies characteristic considered are:-

4.1 Firm size

Many researchers have found a positive relationship between firm size and the extent of disclosure (i.e. Akhtaruddin, 2005; Aksu & Kosedag, 2006; Ali et al., 2004; Barako et al., 2006; Ho& Wong, 2001; Robb et al., 2001).

Firm size has been measured by different variables such as total assets, sales, number of shareholders

and capital stock and net income. Cooke (1992) argues that there is no theoretical reason to choose any one variable. Therefore, a total assets measure was chosen for the purpose of this study and a hypothesis related to this variable is shown as follows:

H1 There is a significant positive association between firm size and the extent of aggregate disclosure.

4.2 Leverage

The level of financial disclosure could be affected by leverage, as measured by long term debt/equity. For instance, a high debt/equity ratio may enhance disclosure policy for managers and encourage them to disclose more information to meet the interests of the lenders. Conversely, a low ratio could induce managers to orient their disclosure policy toward shareholders more than creditors (Malone, 1993). Agency theory assumes that highly leveraged firms are more likely to transfer wealth from bondholders to shareholders. Therefore, the agency costs increase due to the increase of monitoring costs (Abd-Elsalam, 1999; Hossain, Perera, & Rahman, 1995).

The ratio of long term debt to owners' equity is used for leverage in this study. The following hypotheses are tested:

H2 the extent of aggregate disclosure is positively related to long term debt/owners' equity ratio.

4.3 Profitability

There is a general proposition that a company's willingness to disclose information is positively related to its profitability. Managers are motivated to disclose more detailed information to support the continuance of their position and remuneration and to signal institutional confidence. Several studies have suggested that there might be a link between profitability and disclosure. For example, Apostolos et al., (2009) suggest that profitability of the companies is expected to disclose more information about their performance.

A number of profitability measures were used by previous researchers. They include net profit to sales, earnings growth, dividend growth and dividend stability (Cerf, 1961), rate of return and earning margin (Singhvi, 1967 and Singhvi and Desai, 1971). However, Karim and Ahmed et al. (2005) use net profit to sales ratio for measuring profitability. In this study 'Earnings per share (Equity)' is taken as a variable to measure the profitability

H3 There is a significant positive association between rates of return and the extent of aggregate disclosure.

4.4 Listing status

Some researchers discovered that listed companies disclose more information than non-listed ones (Singhvi & Desai, 1971; Wallace, Naser, & Mora, 1994). Aktheraruddin (2005) demonstrates that company age is a critical factor in determining the level of corporate disclosure in the sense that older companies with more experience are likely to include more information in their annual reports in order to enhance their reputation and image in the market. However, for this research this is segregated in such a way that companies incorporated and listed before 2000 year are treated as older and companies incorporated and listed after the 2000 year are treated relatively new.

H4. The extent of aggregate disclosure is greater for companies listed after 2000 r in the BSE than companies listed before 2000 in the BSE.

4.5 Ownership structure

Hossain (1994), Haniffa and Cooke (2002) and Barako (2006) discovered 172 B. Omar, J. Simon / Advances in Accounting, incorporating Advances in International Accounting 27 (2011) a positive association between ownership structure and disclosure level.

Barako (2006) pointed out that due to the large ownership stake; institutional owners have a significant effect by monitoring the disclosure practices in the company. Thus, managers may disclose information voluntarily in order to meet the expectations of the large shareholders. Ownership structure means the participants in the ownership group from different nationality.

The following hypothesis is tested:

H5. There is a significant association between the Ownership structure and the extent of aggregate disclosure.

4.6 Audit firm size

Ali et al., 2004; Anderson & Daoud, 2005; Barako, 2006). Ahmed and Nicholls (1994) drew attention to the fact that size of audit firm can significantly affect the amount of information disclosed in financial statements.

In the present study size of the audit firm of the sample firm were divided into big four firm and small firms (other than big four). If the audit firm is done by A.F. Ferguson & Co , Deloitte Haskins & Sells, S.B. Billimoria & Co, S.R. Batliboi & Co, Lovelock & Lewes, S.R Batliboi & Associates , BSR & Co, Pricewater House &Co and Lodha & Co audit firm is consider as big four and other wise small firm.

H6. There is a significant positive association between a company being audited by a Big audit firm and the extent of aggregate disclosure.

In summary, Table 1 shows the proxies used for independent variables and the expected signs of the association, with the extent of aggregate disclosure for each hypothesis.

Table-1

Short Description of Explanatory Variables

Hypotheses	Proxies	Predicted Signs
Firm size	Asset Size in million of Rupees	+
Leverage	Debt/Equity ratio '0' if less than 1 and '1' if greater than 1	+
Profitability	Profitability – Earning Per Share	+
Listing status	Year of Incorporated in the Stock Exchange -- '0' if listed after 2000 and '1' if listed on or before 2000	+
Ownership Structure	Ownership Structure – '0' if types of ownership are limited with one or two Groups and '1' if ownership is spread more than two groups.	+
Audit firm size	The size of Audit Firm Audited by other firm – '0' if the Audited by big four firm - '1'	+

5. RESEARCH METHODOLOGY

5.1. Sample selection

The annual reports of 30 renowned companies for the year 2011-12 in the BSE were examined in this study from different sector excluding banking and others sector. Bombay Stock Exchange (BSE) is literally the barometer of the Indian Capital Market. The BSE is the oldest stock exchange in Asia.

5.2. Construction of the disclosure index

Since this study is not directed to a specific user group, an unweighted index was used. Hence, a scoring sheet of all possible items was developed. The aggregate disclosure index includes two primary sources of information, mandatory and voluntary disclosure items. Such a comprehensive index was constructed based on the following:

1. Companies Act 1956 and Securities Contracts (Regulation) Act, 1956.

2. Items included in the annual reports issued by Indian companies listed in the Bombay stock exchange which contains financial statements and other quantitative and qualitative information.

5.3 Scoring and weighting disclosure items

The unweighted approach is used in this study for the following reasons. First, the focus of this research is directed to all user groups and not to a specific one. Cooke (1989) considered the unweighted approach to be an appropriate tool in such disclosure studies. Second, the large number of items in the index reduces the impact of weighting individual items differently. Third, previous studies that have used both weighted and unweighted scores report substantially similar results (Ferguson et al., 2002). Chow and Wong-Boren et al. (1987) concluded that there was a high level of correlation between both indices (weighted and unweighted).

This study adopts a disclosure model based upon the unweighted approach. A dichotomous method is applied in which an item scores one if it is disclosed and zero if it is not disclosed. We can construct an Overall Disclosure Index (ODI) / Statutory Disclosure Index (SDI) in such a way that if an item mentioned above is disclosed in the annual report of the company concerned, this will get a score of 1 for that item, otherwise 0 if not disclosed that item. In this way, we can add up all the items disclosed by the company. Precisely, the following formula is used for constructing the ODI:

$$\text{ODI/SDI}=\frac{Total\ No\ of\ Items\ disclosed\ in\ Annual\ Report}{Total\ number\ of\ Discloserable\ Items}$$

Symbolically,

$$ODI/SDI=\frac{\sum_{i=1} dm_i}{\sum_{i=1} dn_i}$$

Where d = 1 if a disclose able item is disclosed, 0 if that item is not disclosed

m = number of items disclosed

n = maximum number of disclosure items possible

The Index was constructed based on the Table-2 shown in Appendix-1

6. STATISTICAL TESTS

There is always a debate to use which statistical method i.e. parametric or non parametric. A review of disclosure studies revealed that many researchers (Abd-Elsalam et al., 1999; Akhtaruddin, 2005; Al-Shiab, 2003; Camfferman & Cooke, 2002; Cooke, 1989) use both parametric and non-parametric tests. The major decision between using parametric or non-parametric tests depends on the assumptions of parametric tests, specifically the assumption of normal distribution. In this study Pearson Correlation (parametric), Spearman's rho (non-parametric test) and way analysis of variance (ANOVA) test (parametric) test has been used to verify corporate disclosure level with several independent variables. The advantage of applying both techniques is to minimize the possibility of incorrectly rejecting the null hypothesis (Cooke et al., 1989). In addition, non-

parametric tests can be used to check the results of parametric tests (Al-Shiab, 2003).

7. RESULTS AND DISCUSSION

The extent of aggregate disclosure was explored for 15 companies using the aggregate disclosure index. The aggregate index includes 338 items of which are divided into ten groups. A checklist comprising aggregate items was applied for each annual report in order to determine the extent of disclosure for each company.

As seen from Table 3, the average level of aggregate disclosure was 84.90%. In other words, 84.90% of the 338 items of aggregate disclosure were disclosed by the 15 companies studied.

Table 3

Descriptive Statistics of Dependant and Independent Variables

	N	Minimum	Maximum	Mean	Std. Deviation
ODI	30	68.29	93.29	85.2637	5.75462
FS	30	2562.47	1408378	233719.3	376609.74422
LV	30	.10	139.07	18.5163	26.58786
POF	30	.00	7.44	.9023	1.67062
LS	30	.00	1.00	.6000	.49827
OS	30	.00	1.00	.8667	.34575
AS	30	.00	1.00	.4000	.49827
Valid N (listwise)	30				

The above Table reveals that the average overall disclosure of the listed companies in India is 85.26% the highest achieved by firm is 93.29% and lowest score is 68.29 % and standard deviation of 5.75 %. So the firms are not widely distributed regard to corporate disclosure. The average leverage of the firm is 18.51 with 26.68 standard deviation. Generally, companies with higher ratios are thought to be more risky because they have more liabilities and less equity. The mean of audit variable is .47 and standard deviation is .49. It indicate that some companies do audit by big four firm. In this study profitability is measured by earning per share having 1.67 standard deviation. Listing status shows that more than 60 % company have listed after 2000 year.

Table 4

Parametric Test - Correlations between Dependant and Independent Variables

		ODI	FS	LV	POF	LS	OS	AS
ODI	Pearson Correlation	1	.084	.026	.161	-.059	-.271	.059
	Sig. (2-tailed)		.661	.892	.394	.758	.147	.758
	N	30	30	30	30	30	30	30
FS	Pearson Correlation	.084	1	.119	.199	-.458*	.033	-.094
	Sig. (2-tailed)	.661		.531	.291	.011	.863	.622
	N	30	30	30	30	30	30	30
LV	Pearson Correlation	.026	.119	1	-.071	.103	-.001	.409*
	Sig. (2-tailed)	.892	.531		.710	.587	.995	.025
	N	30	30	30	30	30	30	30
POF	Pearson Correlation	.161	.199	-.071	1	.033	.173	-.240
	Sig. (2-tailed)	.394	.291	.710		.861	.360	.202
	N	30	30	30	30	30	30	30
LS	Pearson Correlation	-.059	-.458*	.103	.033	1	-.120	-.167
	Sig. (2-tailed)	.758	.011	.587	.861		.527	.379
	N	30	30	30	30	30	30	30
OS	Pearson Correlation	-.271	.033	-.001	.173	-.120	1	.120
	Sig. (2-tailed)	.147	.863	.995	.360	.527		.527
	N	30	30	30	30	30	30	30
AS	Pearson Correlation	.059	-.094	.409*	-.240	-.167	.120	1
	Sig. (2-tailed)	.758	.622	.025	.202	.379	.527	
	N	30	30	30	30	30	30	30

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

The correlations table 4 displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two or more variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself. Correlations above the main diagonal are a mirror image of those below. The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.05) then the correlation is significant and the two variables are linearly related. In this study listing status and firm size variables are linearly related and audit firm size and leverage variable are also linearly related. In others words these variables are significant to express disclosure level. There are negative correlation between leverage and Profitability. Listing status and firm size shows negative correlation On the other hand there is positive correlation between ODI and firm size, leverage, profitability and audit firm size.

Table 4a

Nonparametric Test - Correlations between Dependant and Independent Variables

			ODI	FS	LV	POF	LS	OS	AS
Spearman's rho	ODI	Correlation Coefficient	1.000	.262	.420*	.104	-.008	-.249	.055
		Sig. (2-tailed)	.	.162	.021	.585	.967	.184	.773
		N	30	30	30	30	30	30	30
	FS	Correlation Coefficient	.262	1.000	.384*	.093	-.369*	.023	.134
		Sig. (2-tailed)	.162	.	.036	.627	.044	.905	.481
		N	30	30	30	30	30	30	30
	LV	Correlation Coefficient	.420*	.384*	1.000	-.134	-.031	-.215	.385*
		Sig. (2-tailed)	.021	.036	.	.480	.869	.253	.036
		N	30	30	30	30	30	30	30
	POF	Correlation Coefficient	.104	.093	-.134	1.000	-.102	.227	-.067
		Sig. (2-tailed)	.585	.627	.480	.	.590	.227	.725
		N	30	30	30	30	30	30	30
	LS	Correlation Coefficient	-.008	-.369*	-.031	-.102	1.000	-.120	-.167
		Sig. (2-tailed)	.967	.044	.869	.590	.	.527	.379
		N	30	30	30	30	30	30	30
	OS	Correlation Coefficient	-.249	.023	-.215	.227	-.120	1.000	.120
		Sig. (2-tailed)	.184	.905	.253	.227	.527	.	.527
		N	30	30	30	30	30	30	30
	AS	Correlation Coefficient	.055	.134	.385*	-.067	-.167	.120	1.000
		Sig. (2-tailed)	.773	.481	.036	.725	.379	.527	.
		N	30	30	30	30	30	30	30

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

Spearman's rho uses the ranks of the data to calculate correlation coefficients. Spearman's rho is a rank-order correlation coefficient which measures association at the ordinal level. This is a nonparametric version of the Pearson correlation based on the ranks of the data rather than the actual values. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each

variable has a perfect positive linear relationship with itself. Correlations above the main diagonal are a mirror image of those below. In this study leverage and overall disclosure index has correlation but other variables except listing status and ownership structure shows positive correlation with ODI. Firm size, Leverage and listing status variable shows correlation are significant and the two variables are linearly related. LS and FS shows two variables are linearly related. AS and LV also shows correlation is significant in this study.

The model developed here is based on all the listed companies on Bombay Stock Exchange (BSE). A summary of the regression output using "ENTER" method is shown in Table-5. To have concrete outcome of accepting and rejecting the hypothesis (H0), the following table-6 is provided that shows the ANOVA and the value of F.

Table 5

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	143.717	6	23.953	.675	.671[b]
	Residual	816.637	23	35.506		
	Total	960.354	29			

a. Dependent Variable: ODI

b. Predictors: (Constant), AS,FS,OS,POF,LV,LS

The above Table gives us a direction regarding the acceptance and rejection of hypothesis. The calculated (empirical) value of F is .675 and the Table (theoretical) value of F is 2.53 at 5% level of significance with 6 and 23 degree of freedom. This indicates that the null hypothesis (H0) may be accepted. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. But in this study significant value is more than .05 stating that independent variables like Firm size, Leverage, Profitability and Audit firm size are not much helpful for good corporate disclosure.

In order to assess the impact of each variable on the aggregate disclosure level, the following regression model has constructed.

$AD = \beta 0 + \beta_1 FS + \beta_2 LV + \beta_3 POF + \beta_4 LS + \beta_5 OS + \beta_6 AS + e$

Where:

AD Aggregate disclosure index

FS Firm size

LV Leverage

POF Profitability

LS Listing status

OS Ownership structure

AS Audit firm size

The regression model contains six continuous variables (firm size, leverage, profitability, Listing status, ownership structure, Audit firm size).

The results of this model are shown in Table 5a.

Table 5a

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.387[a]	.150	-.072	5.95869

a. Predictors: (Constant), AS,FS,OS,POF,LV,LS

This table displays R, R squared, adjusted R squared, and the standard error. R, the multiple correlation coefficients, is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. So here R is .387 which indicate that there is moderate relation between dependent and independent variables. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. In this analysis R Square is .150 which indicate that 15% independent variable are responsible for corporate disclosure.

Table 5b

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	89.101	3.930		22.672	.000
	FS	4.87E-007	.000	.032	.134	.894
	LV	-.004	.049	-.020	-.086	.932
	POF	.875	.714	.245	1.225	.233
	LS	-.752	2.739	-.065	-.274	.786
	OS	-5.717	3.320	-.344	-1.722	.099
	AS	1.860	2.693	.161	.691	..497

a. Dependent Variable: ODI

The t statistics can help you determine the relative importance of each variable in the model. As a guide regarding useful predictors, look for t values well below -2 or above +2. In the above table POF variable is a good positive predictor for corporate disclosure because t value is 1.225 which is near to 2. OS variable is a good negative predictor for

corporate disclosure because t value is -1.722 which is near to 2. Other variable may not fit in this model. They may not be a good predictor for corporate disclosure.

The disclosure score for each company is related to company attributes, the independent variables for the study. The results reveals that the adjusted R^2 is 0.15 which reveals that the model is capable of explaining 15% variability in disclosing information in the annual reports of the listed companies in India and corporate disclosure score can be explained by the variation in the whole set of independent variable. The F statistic indicates that the model employed to explain the variation in mandatory disclosure in company annual reports is not significant at the conventional level ($p<.05$).

8. CONCLUSIONS AND IMPLICATIONS

The study evaluated the extent of aggregate disclosure practices for Indian companies listed on the Bombay Stock Exchange (BSE). The study revealed that the level of aggregate disclosure is 85%, much higher than that reported in previous studies in India which is 73% in 2008-09 by Ruchita Daga et al. (2010). In addition, the extent of aggregate disclosure varied among Indian companies and ranged from a low of 68% to a high of 93%

In addition, this study examined the relationship between the disclosure and a number of company characteristics for Indian companies listed in BSE. The findings of correlation by Pearson revealed that firm size and listing status variables significantly associated with the extent of aggregate disclosure at least at the 5% level of significance. The findings of correlation by Spearman's also revealed that leverage, listing status and auditing status variables significantly associated with the extent of aggregate disclosure at least at the 5% level of significance.

In the multivariate analysis, multiple regression models have been used in order to assess the impact of each variable on the aggregate disclosure level.

The ANOVA F test value is .675 and the Table value of F is 2.53 at 5% level of significance with 6 and 23 degree of freedom which shows that the variables are responsible for corporate disclosure.

Since the extent of disclosure is related to firm characteristics, it is suggested that regulators in India should focus on firms that are not profitable and not audited by the one of big audit firms, ownership structure in order to improve their aggregate annual reporting disclosure levels. These companies have to improve their disclosure in order to compete with other companies.

9. LIMITATIONS AND FUTURE RESEARCH

The samples for studies are small and more samples can be added to get extra and perfect findings. The study has investigated the level of aggregate disclosure using the annual reports for one single year 2010-11. To get more accurate result disclosure behavior over a longer period of time should be studied. This study was limited to one source of information, the annual report. Other reports like interim reports, prospectuses, internet sources and financial press releases may be useful for future research disclosure studies. Construction of the Overall disclosure index and assigning scores are of personal judgment and a personal viewpoint on the part of the researcher. Any index may not be a perfect indicator of the level of disclosure. The exact need of user for corporate disclosure was not part of study. No distinction has been made between compulsory and voluntary items of disclosure for the purpose of this study. However, in spite of these limitations, this study makes some important contributions to the knowledge about corporate disclosure in developing countries.

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Appendix-1

Disclosure Index in Annual Report (2011-12)

S. No.	Company Name	Notice	DR	MDA	CGR	AR	BS	PL	CFS	AP	Notes	TDI	TODI	ODI
1	ACC Ltd.	3	10	11	10	25	100	52	32	17	16	276	328	84.15
2	DLF Ltd.	3	9	11	10	30	121	57	32	17	16	306	328	93.29
3	Pidilite Industries Ltd.	3	10	12	10	30	111	55	31	17	15	294	328	89.63
4	Tata Chemicals Ltd.	3	10	12	10	27	120	56	32	17	16	303	328	92.38
5	Bharat Heavy Electricals Ltd.	3	10	12	10	30	112	51	32	17	14	291	328	88.72
6	Crompton Greaves Ltd.	3	10	11	10	29	123	54	31	16	11	298	328	90.85
7	AIA Engineering Ltd.	3	10	12	10	29	98	55	32	17	16	282	328	85.98
8	Shanthi Gears Ltd.	3	7	11	8	28	78	47	25	9	8	224	328	68.29
9	Network 18 Media & Investments Ltd.	3	9	12	10	28	108	54	32	15	15	286	328	87.2
10	Sun TV Network Ltd.	3	9	12	10	28	119	53	32	15	16	297	328	90.55
11	L&T Finance Holdings Ltd.	3	7	7	8	27	107	54	31	12	12	268	328	81.71
12	Power Finance Corporation Ltd.	3	10	12	10	29	110	56	31	16	15	292	328	89.02
13	Britannia Industries Ltd.	3	10	12	10	29	123	56	30	16	13	302	328	92.07
14	Kwality Dairy (India) Ltd.	3	10	12	10	29	88	53	30	16	13	264	328	80.49
15	Fortis Healthcare Ltd.	3	9	12	10	28	96	53	31	16	15	273	328	83.23
16	Apollo Hospitals Enterprise Ltd.	3	9	12	10	28	115	57	32	17	13	296	328	90.24
17	Infosys Ltd.	3	10	12	10	27	97	52	28	10	12	261	328	79.57
18	Tata Consultancy Services Ltd.	3	10	12	10	28	120	52	31	15	14	295	328	89.94
19	Ballarpur Industries Ltd.	3	10	12	8	29	97	49	30	13	12	263	328	80.18
20	JK Paper Ltd.	3	10	12	10	28	110	53	31	15	12	284	328	86.59
21	Astral Poly Technik Ltd.	3	10	11	9	29	87	53	30	14	14	260	328	79.27
22	Finolex Industries Ltd.	3	9	8	10	29	105	60	31	13	13	281	328	85.67
23	NHPC Ltd.	3	10	12	9	31	101	58	30	16	14	284	328	86.59
24	NTPC Ltd.	3	10	12	9	29	96	54	30	15	15	273	328	83.23
25	Kokuyo Camlin Limited	3	9	12	10	31	88	57	31	14	14	269	328	82.01
26	Navneet Publications (India) Limited	3	8	6	10	29	85	55	28	15	12	251	328	76.52
27	Bharti Airtel Limited	3	9	12	9	29	96	52	31	15	15	271	328	82.62
28	Idea Cellular Ltd.	3	8	12	10	29	75	54	31	16	15	253	328	77.13
29	Aditya Birla Nuvo Limited	3	10	12	10	30	121	52	30	14	15	297	328	90.55
30	Arvind Ltd.	3	9	8	10	31	121	55	32	13	14	296	328	90.24

Abbreviations

(DR) - Directors' Report

(MDA) - Management discussion and analysis

(CGR) - Corporate Governance Report

(AR) – Auditor Report

(BS) - Balance Sheet

(PL) – Profit Loss Account

(CFS)-Cash Flow Statement

(AP) – Accounting Policy

(TDI) – Total Disclosure Index

(TODI) –Total Overall Disclosure Index

(ODI) –Overall Disclosure Index

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