

ISSN-0972-1479

INDIAN JOURNAL OF ACCOUNTING

VOL. XXXII

JUNE 2002



JOURNAL OF
THE INDIAN ACCOUNTING ASSOCIATION

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EDITORIAL

Accounting education and research is now getting new focus and priorities. Accordingly the role of professional bodies are being redefined and the fresh perspectives are strengthening their competencies. Researchers in the field of accounting are now having more focus on field studies and thereby, they are strengthening the discipline of accounting. This issue of the Journal is devoted to varied issues affecting accounting education and research. Antonios A. Papas of Greece used a normative index to measure disclosures in the annual reports of Greek firms. Mr. J. Verma and others analysed strategic issues relating to measurement of corporate social reporting in Indian Public Sector enterprises. Dr. N.H. Singhvi summarised Luca Pacioli's book on double entry book keeping for our young researchers. Rationale, valuation basis and capitalisation of internally developed brands are discussed by Dr. Jain and Dr. Mangal. Mr. Mondal and Mr. Gupta compiled selected reviews and empirical findings on EVA. Capital recovery index was applied to selected road transport undertakings by Dr. Saraswat and Dr. Agrawal. The role of accounting professionals in corporate governance was examined by Dr. G.L. Dave and Dr. Manisha Dave. Dr. S.C. Bardia explained EVA as performance indicator and used it in case study of Infosys. Sumana Ghosh made an attempt to harmonize AS-1, AS-2 and AS-3 with international standards. An empirical study on waste management in cotton textile industry of Rajasthan was conducted by Dr. G.L. Malodia. Ballooning Analysis of lease was done by Dr. R.K. Jain. Industrial Engineering-Accounting interface was examined by Dr. G. Soral. An empirical study to analyse investor's behaviour in Tamil Nadu by Dr. Chauhan and Dr. Rangarajan revealed that investors are security conscious. Dr. Alok Chakrawal outlined certain new issues with respect to convergent accounting.

1.7.2002

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AN ASSESSMENT OF MANDATORY DISCLOSURE IN THE ANNUAL REPORTS OF GREEK FIRMS

*Antonios A. Papas

ABSTRACT

Financial reporting practices are regulated extensively by statute in most countries. This paper addresses the issue of assessing whether non-financial firms in Greece disclose in their annual reports basic information items required by law and examines the impact certain market factors and firm characteristics have on disclosure policies. Disclosure was measured by a normative index representing the number of information items reported in a firm's annual report relative to a checklist of items required. A regression model was used to determine which of the independent variables explain better the observed variations in the index. This paper provides evidence that stock exchange listing and foreign affiliations of reporting firms are significantly associated with the extent of disclosure in annual reports.

However, Dye (1985) argues that any expansion of mandatory information requirements is justifiable only if managers fail to voluntarily disclose this information. This is of primary concern for accounting regulation, since it is possible for management to disclose voluntarily information on certain items, and still withhold mandatory information on other items. Although financial disclosure is less and less voluntary, only a small number of articles (Tal, et al., 1990; Kamran and Des Nicholls, 1994) have addressed the issue of assessing the degree of corporate compliance with statutory disclosure requirements. Even in the European Union where every member state (except the United Kingdom) has its reporting practices regulated extensively by law (Flower, 1999), no research on the same issue has, to our knowledge, been conducted. On the contrary considerable research has been undertaken on the factors that explain voluntary disclosure in various countries i.e., Mexico, (Chow and Wong-Boren, 1987); Sweden, (Cooke, 1989); Spain, (Wallace, et al. 1994); Switzerland, (Raffournier, 1995); and Spain, (Giner, 1997).

The purpose of the research reported on in this paper is threefold. First, this study attempts to examine the extent of mandatory disclosure of Greek companies. Second, this research seeks to identify the determinants of the extent of management compliance with

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disclosure requirements. Third, this paper examines whether or not results of previous studies on voluntary disclosure are also implicated in the case of mandatory disclosure. This study differs in a number of ways to those studies that refer to financial disclosure, voluntary or mandatory. First, previous research has concentrated on listed firms only, whereas this paper focuses on both listed and unlisted firms. Second, this research utilises a normative disclosure index, instead of relying on a positively constructed index, commonly found in other studies. Third, earlier studies factor in the analysis (model) variables that explain management disclosure policies in terms of firm characteristics only, whereas in this study additional factors are included which relate to business environment. The paper is organised in following three sections : Prior Evidence and Hypotheses, the research method used and results. Finally, conclusions and ideas for future research are outlined in the section Concluding Remarks.

I. PRIOR EVIDENCE AND HYPOTHESIS

A number of factors influence in a conjunctional manner the formation of corporate financial reporting policies. One set of factors comes from the business environment and includes disclosure cultures from capital suppliers, auditors, and companies (domestic and international) with which the firm is associated (Wallace et al., 1994). Another set of factors relates to firm s characteristics, such as size, stock exchange listing, liquidity and profitability. The hypotheses tested in this paper are discussed below.

Size

The size of the reporting company plays a significant role in ensuring implementation of accounting rules. According to Hancher and Moran (1998), the company s size influences positively management response to enforcement pressures. One reason in support of this influence is that adherence to statutory accounting requirements is a costly exercise and the larger firms can best afford such costs (Buzby, 1975). A second reason is that larger firms tend to raise funds from the stock market more often than do smaller firms, thus it might be to their own interest to comply with statutes in their annual reports (Tai et al. 1990). Furthermore, it is assumed that large firms, which are sensitive to political costs, will comply more with accounting statutes in order to allay government intervention in their affairs (Watts and Zimmerman, 1978). Previous studies support the argument that the extent of voluntary financial disclosure increases with firm size (Chow and Wong-Boren, 1987; Wallace, 1988, Giner, 1997). However, Kamran and Des Nicholls (1994) have found size is not significantly related with the extent of corporate compliance with mandatory disclosure requirements. Researchers have used different measures of size. In this study, two size variables are used, namely the book value of total assets (ASSETS) and annual turnover (SALES).

Listing

In their efforts to reduce shareholder s monitoring costs, stock exchanges employ monitoring and enforcement mechanisms to ensure compliance with listing requirements.

In response to these regulatory pressures, and in order to obtain capital at reasonable costs, listed companies are expected to comply more with accounting regulations than unlisted companies. In support of this hypothesis, Firth (1979) and Cooke (1989) report that the extent of disclosure is affected significantly by the firm's listing status. However, other researchers (Buzby, 1975; and Wallace, 1994) did not find a significant influence. To test this hypothesis, it was necessary to introduce a dummy variable (LIST) which takes the value of one if the company is quoted on the Athens Stock Exchange and zero if it is not quoted.

Profitability

When profitability ratios are high, investors are reasonably expected to ask fewer questions about the possible reasons of management performance than when the rate of return is low. For reasons of self-interest, management's response to these demands is not always positive. As Singhvi and Desai (1971) indicate, high earnings motivate managers to comply with the rules and disclose detailed information in order to assure investors of the firm's profitability, and thus, support the continuance of their positions and compensation arrangements. Inversely, when earnings are low, managers may not comply fully with accounting rules in order to conceal the reasons for declining profits. Sending wrong signals to the market may cause, however, information asymmetry between the firm and investors and may produce the problem of adverse selection (Akerlof, 1970). The influence of profitability on management's disclosure policies has been tested by previous studies (Wagenhofer., 1990; Giner, 1997), but it is not strongly supported by empirical evidence. In this study, the ratio of net income over total assets (ROI) is tested as independent variable representing profitability.

Audit Firms and Auditors

It is argued (DeAngelo, 1981) that large and reputable audit firms exert more influence over the reporting policies of client companies than smaller and lesser known firms, otherwise they risk losing some of their reputation as providers of quality audit. In response to pressures from large audit firms, client companies are expected to comply more with accounting regulations than firms, which are not under such pressure. The relationship between size of audit firm and client disclosure was tested in previous studies, but the results are not consistent. Singhvi and Desai (1971) and Craswell and Taylor (1992) confirmed the hypothesis, while Firth (1979) and Wallace (1994) did not find any relation. To test this hypothesis here, the variable SAF (size of audit firm) is employed. It receives the value of one if the auditor of the reporting company belongs to one of the country's largest audit firms i.e. SOL S.A. or the (then) Big Six and the value of zero otherwise.

Although research focuses on the size of audit firms as predictor of management disclosure, other factors, like auditor's mentality may also contribute to explaining management compliance with accounting regulations. Auditors that view themselves as guardians of the law and have developed a legalistic mentality (as the case is with ex - SOL members in Greece), are expected to maintain their reputation by applying pressure on

clients to strictly comply with every statutory disclosure requirement. Earlier studies have not tested such a hypothesis. In order to test it, the dummy variable MENT (auditor's mentality) is introduced. It takes the value of one if the auditors of the reporting company were members of SOL prior to 1992 audit reforms and the value of zero if the auditors were not SOL members.

Internationality

In an effort to reduce uncertainty about their investment, international capital suppliers demand expanded financial disclosure and encourage transparent financial reporting practices. Prior research (Zarzeski, 1996; El-Gazzar et al. 1999) shows that firms with international affiliations tend to respond positively to these demands. They usually prepare two sets of accounts, one set which is required by international markets and another set which is required by national legislation. In cases where the disclosure requirements of foreign shareholders are greater than those of the local law, it is likely the extent of disclosure to be greater among firms with international affiliations. In support of this hypothesis, Cooke (1989) found that Swedish companies whose shares are listed on foreign markets disclose voluntarily more information than firms quoted in Sweden only. On the other hand, Garcia-Benau and Monterrey-Mayoral (1992) report that no significant relationship exists between the level of a firm's exports and the extent of financial disclosure. Furthermore, Tai, et al. (1990) found that some Hong Kong companies with international affiliations showed no concern for the quality of disclosure in the local statutory accounts as long as their holding company accepted the financial statements. Most of previous studies measure internationality by the export-on-sales ratio. Since very few firms in Greece provide a breakdown of sales by geographical area, a dichotomous variable (INTER) is used in this study to represent the reporting firm's foreign ownership. The variable receives the value of one if the firm is internationally affiliated and zero if it is not.

II. RESEARCH METHODOLOGY

The focus of this study is on disclosure policies of non-financial Greek companies both listed and unlisted. The exclusion of banks, insurance and investment companies and mutual funds was due to their different reporting requirements and to lack of comparability on certain items i.e. sales. A sample of 60 companies was drawn randomly from a list of 120 nonfinancial firms whose securities were traded on the floor of the Athens Stock Exchange by the end of 1998. In addition, 74 large unlisted non-financial firms were selected randomly from the Directory of Greek Companies, a publication which covers major unlisted firms. A letter to all 134 firms requested their annual reports for the year ending in December of 1998. A total of 55 reports were received from listed firms and another 38 reports were received from unlisted firms. Initial screening of all 93 annual reports revealed that the contents of 8 of them were not comparable. The final sample consists of 51 reports of listed firms and 34 reports of unlisted.

Data relating to independent variables (discussed above) were collected from the annual reports and accounts of each sample firm. Auditor's reports provide useful information on incidents of non-disclosure, the type of auditor employed by the reporting company and the company's international affiliations. Information on auditor's membership to SELE prior to 1992 audit reforms was obtained from an internationally affiliated audit firm in Greece.

A normative index is employed in this paper to measure the extent of financial disclosure among sample firms. However, the inclusion in the index of all items required by law to be reported would have made measurement unnecessarily burdensome. To help in the selection of the items, a checklist provided by a large local audit firm was used. The list contains 76 statutory disclosure requirements, which are believed to be essential for a proper understanding of the financial statements. Non-disclosure of any one of these items would normally lead to a qualified auditor's opinion on the fairness of accounts. The list of selected items was not directed at a specific user group since the law calls for the preparation of general purpose financial statements that would serve the needs of all users.

A methodological problem inherent to construction of the index comes from the fact that every disclosure requirement is not necessarily relevant to all companies. In earlier studies, items that were not relevant or applicable to a particular firm were excluded from the checklist, so the firm was not penalised for not disclosing them. This study does not encounter such a problem because firms in Greece are obliged to state in the supplement to their accounts the disclosure requirements that are not relevant or applicable to them. For example, a non-diversified company must report 'not relevant' next to the requirement of disclosing sales breakdown by activities.

Following previous researchers, a dichotomous approach is adopted in developing a scoring scheme to capture levels of disclosure compliance. An information item scores one if it is disclosed and zero if it is not disclosed. An item, which is not relevant to the reporting firm, scores one if the firm states in the supplement to the accounts that the item is 'not relevant', and zero if nothing is stated. The disclosure score (DS) of each company is additive.

Once all the information items have been scored, an index is created to measure the level of each company's disclosure. The disclosure index (DI) is a ratio of the actual disclosure score (DS) awarded to a company to the maximum number of items (i.e. 76) it must disclose. Thus, the values the index can take vary from a maximum of one to a minimum of zero, representing differences of disclosure compliance among firms.

A number of earlier studies used weighted indices whose coefficients were determined by users of financial information. Following Cooke (1989, 1992), Wallace (1994) and Giner (1997) the index used in this study is unweighted. The implied assumption is that each disclosure requirement is equally important for the lawmaker. Besides, Chow and Wong-Boren (1987) have found no significant difference between weighted and unweighted disclosure indices.

Model

Correlation and multiple regression techniques are used to analyse the data obtained and test the association of corporate disclosure with the hypothesised explanatory variables. The empirical regression variables are defined as follows :

DI	= disclosure compliance index
ASSETS	= logarithm of book value of total assets
SALES	= logarithm of annual sales
ROI	= net income / total assets
LIST	= dummy variable 1 listed company 0 unlisted company
SAF	= dummy variable 1 auditor belongs to large audit firms: SOL S.A., Big Six 0 auditor does not belong
MENT	= dummy variable 1 auditor is an ex-SOL member (legalistic mentality) 0 auditor is not an ex-SOL member
INTER	= dummy variable 1 internationally affiliated company 0 otherwise

The natural logarithms of the measures of size were calculated in an attempt to avoid the problem caused by heteroscedasticity. Such a problem appears whenever cross-sectional data are used (Netter, et al. 1996). A new dependent variable, the transformed disclosure index (TDI), was created, so difficulties in the regression analysis could be avoided. The TDI values range from $-\infty$ to $+\infty$:

$$TDI = \ln \left(\frac{CI}{I - CI} \right)$$

The regression equation is:

$$TDI_i = b_0 + b_1 ASSETS_i + b_2 SALES_i + b_3 ROI_i + b_4 LIST_i + b_5 SAF_i + b_6 MENT_i + b_7 INTER_i + \varepsilon_i$$

b_0, b_i = constant or parameters to be estimated
 $i = 1 \dots 85$.

III. RESEULTS

The 85 sample companies and the disclosure indices assigned to them are shown in Appendix A. A review of the total number of indices reveals that only nine companies scored more than 90 percent, the highest score being 95.6 per cent. The remaining

companies show low scores, the lowest being 70.4 percent. This implies that none of the sample companies report all information items, although their disclosure is obligatory.

The main descriptive statistics for the dependent variable and the continuous explanatory variables appear in Appendix B. The correlation matrix for all the variables, dependent and explanatory, and the values of adjusted R^2 are presented in Table 1. The correlation between independent variables and the disclosure indices is significant at the 5 per cent level, except for the variables of profitability (ROI) and the size of the audit firm (SAF). As expected, a high level of correlation exists between the two size variables (ASSETS) and (SALES). The high values of adjusted R^2 for the size variables suggest that multicollinearity would be a problem if both variables were included in the same model (Kmenta, 1986).

Table 1
CORRELATION MATRIX

Variables	TDI	ASSETS	SALES	LIST	ROI	SAF	MENT	INTER
TDI	1.000							
ASSETS	0.336**	1.000						
SALES	0.319**	0.770**	1.000					
LIST	0.575**	0.180	0.121	1.000				
ROI	0.109	0.063	0.199	0.037	1.000			
SAF	0.081	0.202	0.109	0.108	0.098	1.000		
MENT	-0.339**	-0.261	-0.271	-0.225*	-0.050	-0.108	1.000	
INTER	0.300**	0.340**	0.384**	-0.011	0.156	-0.040	-0.569**	1.000
R2 (Adj)		0.599	0.603	0.086	0.015	0.041	0.495	0.508

**Significant at the 0.01 level

*Significant at the 0.05 level

To avoid multicollinearity problems when estimating the regression coefficients, two separate regression models were estimated, omitting one size variable each time. The results of each regression run appear in Appendix C. Both measures of size are not significant even at 10 percent level ($p=102$ for ASSETS and $p=103$ for SALES), suggesting that the contribution of these variables in explaining the variability of the level of disclosure is not significant. This result is similar to that reported by Kamran and Des Nicholls (1994). The impact of size can be accounted for by recognizing from Table I that there is significant correlation between the variables ASSETS and SALES on the one hand and INTER on the other. Consequently, the influence of size on TDI will be reflected through the internationality variable.

As shown in Appendix C, the coefficients of auditor-related variables SAF and MENT are low, indicating that their association with changes in the disclosure index is not significant. This is consistent with the findings of Caramanis (1997) that the quality of traditional audit service in Greece does not differentiate significantly between large and small audit firms, and between ex-SOL members and ex-SELE auditors.

A summary of the stepwise regression procedure is shown in Appendix D. When all independent variables are entered in the equation, only LIST and INTER are statistically significant. The first variable entered in the regression model was LIST. It explains 33 per cent of total variance of the disclosure index. A new variable is included in the model only when its *t* statistic is not smaller than the critical value of 1.6634, which corresponds to a significance level of 5 per cent. The second variable that entered the model was INTER, whose inclusion increases R^2 to 42.4 per cent. This value is comparable to that obtained by Raffournier (1995) and Giner (1997). The addition of more variables does not improve the explanatory power of the model. The parameters of both variables, which are included in the regression equation, are in the predicted direction.

In order to test the effectiveness of the regression model, a number of statistical tests were undertaken. The Anderson-Darling, Kolmogorov-Smirnov and Shapiro-Wilk normality tests accept the hypothesis of normally distributed residuals with large *p*-values. Since the Durbin-Watson statistic of 1.74 is larger than the critical value of 1.67, there seems to be no first order autocorrelation in residuals at 95 percent level. The variance inflation factor (VIF) takes values close to unity, suggesting that multicollinearity was not a problem in interpreting the regression results. (Neter et al., 1996).

CAUSES OF NON-DISCLOSURE

In view of the limited level of corporate compliance with disclosure requirements, an attempt was made to investigate the causes of the departures from financial reporting regulation. The investigation was performed by means of an interview survey with company financial executives and audit managers of audit firms. Six financial controllers from local listed and unlisted firms, as well as seven audit managers from SOL S.A. and Big Six were interviewed.

According to the interviewees, accounting regulations and tax rules are so detailed, complex, and in some cases contradictory that formation of disclosure policies becomes problematic. Frequent changes in tax rules accentuate the problem. As reporting requirements are amended and revised from time to time, financial executives may not comply with the up-to-date requirements, and this situation is reflected in their financial statements.

Due to long historical influence of taxation on financial reporting, interviewees reported incidents where accountants were not certain as to whether to apply company law provisions or tax rules while preparing financial statements. One interviewee remarked that the influence of tax law is a disturbing characteristic of financial reporting in Greece, since tax authorities oblige companies to record tax related adjustments in accounting books.

Almost all interviewees regarded the morphology of the local businesses as one of the major causes of non-disclosure practices. Since the vast majority of firms in Greece are small and both family owned and managed, they do not have the human and financial resources to comply with all the detailed disclosure requirements. In addition, the cost of preparing and disseminating required information is relatively higher in small firms than in larger ones.

The interviewees commented that historically, the lending practices of financial institutions (state and private) have not been conducive to adopting more transparent accounts. Until very recently, the main criterion employed by the Greek banking sector for loan evaluation was the existence of collateral. As far as the other source of financing is concerned, equity, the Athens Stock Exchange obliges listed firms to disclose more than the company law requires. The Exchange's enforcement mechanisms however, are not regarded adequate by the managers interviewed.

Three audit managers claimed that some directors tend to purposely withhold information in an attempt to improve the appearance of their companies' financial position and results. Although the financial executives interviewed did not explicitly endorse such claims, audit managers commented that where auditors disagree with the content of financial statements, they could qualify their reports. However, they pointed out that the threat of a qualified report does not constitute always an effective incentive for management to comply with regulations.

CONCLUDING REMARKS

The purpose of this study has been to contribute evidence on compliance of a sample of Greek firms with statutory disclosure requirements and to assess whether there is a significant association between the extent of disclosure and a number of factors related to business environment and to firm characteristics. Disclosure was measured by an index representing the number of items reported in a firm's annual report relative to a checklist of 76 information items. A regression model was used to determine which of the independent variables explain better the variation in the index. The causes of the observed departures from mandatory disclosures were examined by means of an interview survey.

The paper has shown that not all sample firms comply with the statutory disclosure requirements. The extent of disclosure in their annual reports was found to be significantly associated with their listing status and state of international affiliations. The need for capital has been put forward as an explanation of the influence of listing status on shaping corporate disclosure. On the other hand, the level of disclosure of firms with international affiliations is higher than that of firms without such affiliations. A possible explanation is that the disclosure requirements of parent companies (mostly from Anglo American countries) are greater than the corresponding requirements of the Greek Company law.

In earlier studies, the size of the reporting firm was found to be a significant determinant of voluntary disclosure, serving as a proxy for several influences (Ball and

Foster, 1982). Inversely, this paper has shown that the impact of size on corporate compliance with accounting regulations is not significant. A possible explanation is that management of listed firms with international affiliations is subject to influences from equity capital suppliers and parent companies, which are stronger than those emanating from the size of the firm.

According to the findings of the interview survey, the observed deviations from accounting requirements are attributed mainly to strong tax-orientation of the accounting profession, inadequacy of enforcement mechanisms, and morphology of the Greek business community. To increase the degree of corporate compliance with accounting rules, the accounting profession should free its members from their legalistic mentality and strong tax orientation and strengthen, in co-operation with the State, the mechanisms of monitoring and enforcing accounting regulations. The numerous small audit firms should improve their services by reducing the number of departures from the reporting provisions of company law. The enforcement role of the Athens Stock Exchange and financial institutions should also be emphasized in improving reporting quality.

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APPENDIX A

List of Sample Firms and Disclosure Indices

Companies	Index	Companies	Index
1 ALBIO - VIOKARPET	0,795	44 KALPINIS SIMOS	0,889
2 ALCATEL	0,855	45 KARELLIAS	0,881
3 ALLATINI	0,916	46 KATSELI	0,855
4 ALOYMIN. ATTIKIS	0,867	47 KIL.SARANTOPULOS	0,880
5 ALTER TV	0,804	48 KILINDROM.LOULI	0,896
6 ASTIR HOTEL	0,783	49 KLOST. DOUDOS	0,879
7 ATHENS BREWERY	0,865	50 KLOST.NAFPAKTOY	0,884
8 BIKH	0,826	51 KLOSTIR NAOUSIS	0,844
9 BIODYNAMIC	0,776	52 KRONOS	0,824
10 BITROS	0,840	53 LAKY	0,803
11 BRITANNIA	0,880	54 LANAKAM	0,850
12 CHIPITA	0,866	55 LAVIPHARM	0,831
13 D.A.N.E.	0,764	56 LEVENTERIS	0,818
14 DELTA	0,940	57 MAT-FEL	0,883
15 E&H	0,794	58 METKA	0,956
16 ELAIS	0,892	59 MEVACO	0,836
17 ELFIKO	0,904	60 MINERVA	0,884
18 ELGEKA	0,895	61 MOUZAKIS	0,913
19 ELIN. ET. BISKOTON	0,843	62 NEMESIS	0,764
20 ELITE	0,765	63 NIREYS	0,880
21 ELLINIKAL KALODIA	0,870	64 P.NIKAS	0,895
22 ELTON CHEMICALS	0,782	65 PAPAELLINAS	0,853
23 EPILEKTOS	0,891	66 PAVLIDIS	0,915
24 EPKO	0,704	67 PC SYSTEMS	0,801
25 ETMA	0,904	68 PETROPOULOS	0,796
26 F.MILL S.GEORGE	0,828	69 PETZETAKIS	0,856
27 FANCO	0,831	70 PIGASOS	0,765
28 FINTEXPOT	0,906	71 PLASTIKA THRAKI	0,783
29 FRIGOGLASS	0,849	72 PLEXACO	0,805
30 GENIKI TROFIMON	0,820	73 ROKAS	0,778
31 GOODY S	0,903	74 SARANTIS	0,762
32 HALKOR	0,868	75 SELONDA	0,903
33 HALYBDOFYLA	0,831	76 SEX FORM	0,802
34 HALYPS	0,843	77 SKLAVENTIS	0,811
35 HELLAS CAN	0,887	78 SPIDER	0,827
36 HELLENIC FOOD INDUSTRIES	0,908	79 TITAN	0,912
37 INFORQUEST	0,893	80 TRIA A (3A)	0,856
38 INOSETA	0,783	81 TRIA E (3E)	0,940
39 INTERBETON	0,781	82 TRIUMPH INTERNATIONAL	0,900
40 INTERCLIMA	0,801	83 VARVARESSOS	0,863
41 INTRAKOM	0,890	84 VIOSER	0,816
42 IRAKLIS	0,928	85 VIOSOL	0,876
43 JOHNSON & JOHNSON	0,822		

APPENDIX B

Descriptive Statistics for the Dependent and Continuous Explanatory Variables

Variables	Mean	Median	Stand Dev.	Minimum	Maximum
TDI	0.848	0.855	0.0511	0.7040	0.9560
ASSETS	23843.8	11408	48167.7	1160	402981
SALES	20786.9	10100	31616.5	947	162800
ROI	0.090	0.077	0.058	0.010	0.260

APPENDIX C

Model 1

The regression equation : $TDI = 0.798 + 0.00000016 \text{ ASSETS} + 0.0383 \text{ ROI} + 0.057 \text{ LIST} + 0.0029 \text{ SAF} - 0.000884 \text{ MENT} + 0.028 \text{ INTER}$

Predictors	Coefficient	Std. Deviation	T	p-value
Constant	0.798	0.020	40.910	0.000
ASSETS	0.00000016	0.000	1.654	0.102
ROI	0.0383	0.076	0.508	0.613
LIST	0.057	0.010	5.995	0.000
SAF	0.0029	0.011	0.257	0.798
MENT	-0.000884	0.013	-0.069	0.945
INTER	0.028	0.014	1.957	0.054

R-Sq = 44.5% R-Sq(adj) = 40.3% F=10.441 p-value=0.000, D-W=1.781

Model 2

The regression equation : $TDI = 0.800 + 0.00000025 \text{ SALES} + 0.01906 \text{ ROI} + 0.05774 \text{ LIST} + 0.0008378 \text{ SAF} - 0.00131 \text{ MENT} + 0.0273 \text{ INTER}$

Predictors	Coefficient	Std. Deviation	T	p-value
Constant	0.800	0.019	41.277	0.000
SALES	0.00000025	0.000	1.648	0.103
ROI	0.01906	0.076	0.25	0.804
LIST	0.05774	0.009	6.113	0.000
SIZE	0.0008378	0.011	0.075	0.940
MENT	-0.00131	0.013	-0.103	0.918
INTER	0.0273	0.014	1.886	0.063

R-Sq = 44.5% R-Sq(adj) = 40.3% F=10.434 p-value=0.000, D-W=1.744

APPENDIX D

Multiple Regression Results

Dependent variable : TDI				
Independent variables : LIST, ROI, SAF, MENT, INTER				
Step 1. Variable entered : LIST				
	R ²	R ² _{adj}	F	Significance F
	0.331	0.322	40.976	0.000
Variables	Coefficient	t-value	Significance t	
Constant	0.813	112.522	0.000	
LIST	0.0597	6.401	0.000	
Step 2. Variable entered : INTER				
	R ²	R ² _{adj}	F	Significance F
	0.424	0.410	30.203	0.000
Variables	Coefficient	t-value	Significance t	VIF
Constant	0.804	111.342	0.000	
LIST	0.06006	6.9	0.000	1.000
INTER	0.03556	3.652	0.000	1.000
The regression equation is TDI = 0.804 + 0.06006 LIST + 0.03556 INTER				
Excluded variables	t-value	Significance t		
ROI	0.486	0.628		
SAF	-0.069	0.945		
MENT	-0.061	0.952		
D - W = 1.745				

MEASURING CORPORATE SOCIAL REPORTING IN INDIAN PUBLIC SECTOR ENTERPRISES

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ABSTRACT

Corporate social reporting is becoming more and more important in the wake of globalization. This paper makes a study of measuring social performance of 19 public enterprises divided into five industrial groups on the basis of reporting of executives.

Measurement and reporting of SP (SP) of the enterprises forms the core of corporate social performance (CSP). The National Association of Accountants Committee (NAAC) on accounting describes the term s corporate SP as - "The term CSP reflects the impact of corporation s activities on society. This embodies the performance of its economic functions and other action taken to contribute to the quality of life. These activities may extend beyond meeting the letter of the law, the pressures of competition or the requirements of contracts."

There is a growing awareness among corporations about their social role, as there was no particular measure adopted for measuring and reporting of social programmes. In India, Cement Corporation of India Limited (CCI) started measuring their SP by preparing the social income statement and social balance sheet followed by Steel Authority of India Limited (SAIL). The social income statement is based on measuring the social cost benefit analysis. A new approach of measuring SP has also been introduced and is being practiced by various PSEs by preparing Value Added Statement (VAS).

To collect the data, the PSEs having atleast 10 years of life of operations were selected from the following five major industrial groups in the manufacturing units: (1) Iron & Steel, (2) Minerals & Metals, (3) Oil & Petroleum, (4) Fertilizers and (5) Chemicals & Pharmaceuticals. A survey with the help of self-constructed questionnaire was carried out.

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To collect primary data 5 executives of each selected PSEs were administered the questionnaire. In this manner annual reports of 19 selected PSEs were used to analyse the given parameters of the present study. In addition to this $19 \times 5 = 95$ executives responses were also considered to make the findings more reliable and valid.

MEASUREMENT APPROACHES

The Table 1 presents the approaches adopted by the PSEs under the study for measuring the CSP.

Table - 1

MEASUREMENT APPROACHES OF SOCIAL ACTIVITIES

APPROACHES	NO. OF PUBLIC ENTERPRISES (N=19)
Cost Benefit Analysis	4
Value Added Approach	2
Narrative Approach	15

It is observed from the table 1 that only four PSEs prepared a social income statement and social balance sheet on the basis of social cost benefit analysis. Out of these four PSEs two enterprises are from Oil & Petroleum industry viz. Indian Oil Corporation Limited (IOCL) and Gas Authority of India Limited (GAIL) and one each from Iron & Steel industry and Mineral & Metal industry viz. Steel Authority of India limited (SAIL) and National Aluminum Company Limited (NALCO). It has been found that all the above four PSEs have adopted this approach for measurement of SP through out the period under study.

As regard measurement of CSP through VAA it has been reported that only two PSEs has adopted this approach in addition to cost benefit analysis which are SAIL and GAIL, whereas the remaining 15 PSEs neither adopted the cost benefit analysis approach nor value added approach for the purpose of measurement of CSP. These PSEs generally make a descriptive statement about the SP in their annual reports by making reference of SP in chairman s statement and director s reports.

APPRAISAL OF SOCIAL PERFORMANCE

Various methods can be adopted for the appraisal of CSP. These include a description of social programmes and assigning priorities to social programmes, preparation of a comprehensive social audit, measuring social goal achievement, return on social investment etc. Thus, proper appraisal of SP requires their measurement by one or more of the techniques in practices. The table 2 shows the appraisal of SP in PSEs by various approaches adopted to measure the SP.

Table - 2
APPRAISAL OF SOCIAL PERFORMANCE

PARAMETERS	I&S	M&M	O&P	FERT.	C&P
Describing Social Programmes	1	2	5	1	1
Assigning Priorities to Social Programs	1		1		
Preparing Comprehensive Social Audit	-	-	-	-	-
Measuring Degree of Social Goal Achievement	1	-	3	-	-
Measuring Return on Social Investment	-	-	-	-	-
Measuring Rupees-cost of Social Programmes	1	-	1	-	-
Companies Not Measuring Social Performance	-	1	-	-	-

The table 2 states that out of 19 PSEs only ten PSEs make an appraisal by making a description of social activities carried out. Out of these ten PSEs five belongs to Oil & Petroleum (i.e. GAIL, IOCL, BPCL, MRL & HPCL), two from Mineral & Metal (NACL & BACL) and one each from remaining industry (i.e. SAIL, IPCL & NFCL). Among the various social activities to be carried out which has been described earlier only two PSEs, one each from Iron & Steel i.e. SAIL and Oil & petroleum industry i.e. IOCL, assigns priorities to their social programmes which are to be carried out. As regards to social audit and return on social investment, it has been reported that none of the PSEs under study conducted a social audit and measured social investment. Few PSEs under study has measured the achievement of social goals belonging from Oil & Petroleum and Iron & Steel industry. It was also found that one of the enterprises from Mineral & Metal industry does not make any attempt to measure SP. However, on the whole it can be said that PSEs in Oil & Petroleum industry makes effective and sincere efforts for appraisal of SP through various approaches of measuring SP and describing social programmes has been the popular approach for the appraisal of SP.

RESPONSIBILITY AND PERIODICITY OF SOCIAL PERFORMANCE

Social reporting implies the measurement and reporting, internal or external, of information concerning the impact of business enterprise and its activities on society. Social reporting aims at measuring adverse and positive effects of activities both on the firm and those affected by the firm. However, as regard social reporting no specific method and standard has been established yet for measuring CSP. It is necessary that there should be a process for development of some standards by various Accounting Committee and Boards, which can assure that corporate social reporting is meaningful, fair and provides adequate database for social planning and co-ordination. An attempt has been made to analysis and interprets the practices being adopted by the various PSEs under study in this regard. The table 3 depicts the responsibility of reporting on SP.

Table - 3
RESPONSIBILITY OF REPORTING ON SOCIAL PERFORMANCE

Reporting on Social Performance	I&S	M&M	O&P	FERT.	C&P
Internal Management Committee	1	-	3	1	-
Board of Director s	1	3	6	3	1
Others (Chairman s, Auditor s)	1	2	5	2	1

The Table 3 states that the Board of Director s has significant power to report the SP in their annual reports. It has been found that out of 19 PSEs, reference to reporting on SP by Director s in annual reports has been made by 14 PSEs. Out of these 14 PSEs six are from Oil & Petroleum industry (except LIL), three each from Mineral & Metal (except UCL) and Fertilizer industry (except RCFL) and one each from Iron & Steel i.e. SAIL and Chemicals & Pharmaceuticals industry i.e. IPCL. The Internal Management Committee gets the least importance. It has also been found that out of 19 enterprises, reference to reporting on SP by other authorities, has been made by 11 PSEs i.e. five from the Oil & Petroleum industry, two each from Mineral & Metal and Fertilizer industry and one each from remaining industry.

It is not only important that the enterprises should report on the SP but it is also very necessary that the SP should be reviewed periodically to make it more effective. The Table 4 shows review of SP by the public sector enterprises.

Table - 4
REVIEW OF SOCIAL PERFORMANCE

BASIS OF REVIEW	I&S	M&M	O&P	FERT.	C&P
Monthly	-	-	-	-	-
Quarterly	1	-	1	-	-
Half-yearly	1	-	1	-	-
Annually	1	6	7	4	1

The table depicts that all the PSEs review their SP annually. However, it has been found that SAIL from Iron & Steel industry and IOCL from Oil & Petroleum industry also review their SP on quarterly and half-yearly basis too.

MODE OF DISCLOSURE OF SOCIAL PERFORMANCE

The central and state government public enterprises are required to disclose the expenditure on townships and various social overheads on annually basis. Some enterprises disclose capital investment in lump sum amount, without disclosing whether it is gross or net and distribution of investment over townships, social and cultural activities. Very few companies disclose the breakup of expenditure under social amenities. Thus, it is necessary

that there should be a proper means and mode through which the SP should be disclosed on regular basis, which can be easily made available to its users. The table 5 shows the mode of disclosure of SP in PSEs.

TABLE - 5
MODE OF DISCLOSURE OF SOCIAL PERFORMANCE

MODE OF DISCLOSURE	I&S	M&M	O&P	FERT.	C&P
Issuing a Separate Social Report (Magazines, Newspaper etc.)	1	-	5	1	1
Separate Section in Annual Report	1	-	1	-	-
As Part of Director s, Chairman, Auditor Report	1	6	7	4	1

The table 5 brings out the facts that the director s reports/chairman reports is considered as the most popular and convenient mode of making disclosure and reporting of social activities in all the PSEs under the study. These reports are made public through annual reports and electronic media (Internet) wide there respective website. It is also found that eight PSEs, out of which five from Oil & Petroleum (except LIL & CRL) and one each from Iron & Steel (SAIL), Chemicals & Pharmaceuticals (IPCL), and Fertilizer (NFCL) industry also issue a separate social report through magazines, newspapers etc. As regard having a separate section for social reporting in the annual report, it is observed that only two PSEs viz. SAIL and GAIL had made provision in their annual reports.

TYPES OF SOCIAL REPORTING

As regard corporate social reporting, Government of India appointed a committee under the chairmanship of Rajinder Sachar to consider and report on the changes that are necessary in the form and structure of reporting. The committee recommended various steps to be taken by the companies in different sphere with a view of discharging its social responsibilities towards various segment of the society, quantifying where possible and in monetary terms. As such the companies are now required to measure and quantify the SP or activities in monetary terms. Table 6 highlights about the types of reporting practices by various PSEs under the study.

Table - 6
TYPES OF SOCIAL REPORTING

TYPE OF REPORTING	I&S	M&M	O&P	FERT.	C&P
Providing Both Quantitative and Descriptive Social Information	1	-	4	1	1
Providing Only Descriptive Social Information	-	6	3	3	-

The table 6 states that only seven out of nineteen PSEs provide social information on quantitative and descriptive basis and the rest PSEs only provide descriptive social information. It has also been found that all the PSEs in M&M industry make descriptive information where as in O&P industry four PSEs i.e. GAIL, IOCL, HPCL & BPCL make quantitative and descriptive information and rest make only descriptive social information. The PSEs in I&S and C&P make quantitative and descriptive information where as in fertilizer industry, making descriptive social information has been considered as a popular mode of providing disclosure.

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ANNEXURE-1

List of Companies

I&S

1. Steel Authority of India Ltd. (SAIL)

M&M

- | | |
|---|--|
| 1. National Mineral Dev. Corp. Ltd. (NMDCL) | 2. National Aluminium Co. Ltd. (NALCO) |
| 3. Bharat Aluminium Co. Ltd. (BALCO) | 4. Hindustan Zinc Ltd. (HZL) |
| 5. Kudremukh Iron Ore Co. Ltd. (KIOCL) | 6. Uranium Corp. of India Ltd. (UCIL) |

Fertilizer

- | | |
|---|-------------------------------------|
| 1. Nagarjuna Fertilizer Corp. Ltd. (NFCL) | 2. Coromandal Fertilizer Ltd. (CFL) |
| 3. Rashtriya Chem. & Fertilizer Ltd. (RCFL) | 4. National Fertilizer Ltd. (NFL) |

C&P

1. Indian Petrochemical Corp. Ltd. (IPCL)

O&P

- | | |
|--|---------------------------------------|
| 1. Gas Authority of India Ltd. (GAIL) | 2. Cochin Refinery Ltd. (CRL) |
| 3. Lubrizol India ltd. (LIL) | 4. Bharat Petroleum Corp. Ltd. (BPCL) |
| 5. Hindustan Petroleum Corp. Ltd. (HPCL) | 6. Indian Oil Corp. Ltd. (IOCL) |
| 7. Madras Refineries Ltd. (MRL) | |

LUCA PACIOLI AND ACCOUNTING

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ABSTRACT

Summa de Arithmetica, Geometria, Proportioni et Proportionalita by Fra Luca Pacioli is treated as the first printed book on Double Entry Bookkeeping. This book is descriptive on procedures but short on explanations. In this paper all the 36 Chapters have been summarized to show that what is there in this famous book. In a Chapter Pacioli has used Per and A in a Journal entry the reason of using these words has not been explained. He has also used the words debtor and creditor without any explanation, so it is presumed that these words were commonly used by the merchants of Venice 500 years ago. He used the Italian language instead of Roman, as he wrote this book in Venice in 1494.

During the first part of the sixteenth century, one-fourth of all the books printed came only from Venice in Italy. Therefore, a book produced from loose type in 1494 in Venice, must have been among the very first printed, and its subject must have been at that time of such prime importance as to make it worthy of being among the first to be published. The oldest Treatise—Section—that has come down to us either printed or written on the subject of bookkeeping is included as a part of a rather large printed volume on arithmetic and geometry. This volume was published in November 1494, in Venice, Italy. The author of this famous book was a priest from Venice named Fra Luca Pacioli. Fra means father, the word normally used to call a priest in Christian religion. With the use of this word people started calling him father of Bookkeeping. It has been used considerably by later writers on the subject of arithmetic and geometry, and is mentioned in numerous works of bibliographers, both ancient and modern. The title is: SUMMA DE ARITHMETICA GEOMETRICA PROPORTIONI ET PROPORTIONALITA. Bookkeeping is treated in part one, Section 9 Treatise 11, under the chapter title of Particularis Computis et Scripturis, which translated would mean: Particulars of reckonings and Their Recording.¹

Pacioli did not claim that he is the inventor of double entry bookkeeping; but on the other hand he mentioned in his book the existence of ancient customs and numerous methods

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For preparing this paper I have used the translations of this book by John. B. Geijsbeek and the other translations of this work by Pietro Crivelli. I am also thankful to Prof. C. Torben Thomsen of Loma Linda University, U.S.A.

named after the places where they were used. So he called the method of bookkeeping as the method of Venice. The book had about 600 pages of which 25 were devoted to bookkeeping. Into those 25 pages were packed with 36 chapters, some of which were quite short. While the rest of the work used marginal illustrations liberally, there were no marginal illustrations in the section on bookkeeping, except for a brief example of how do no posting references in chapter 12.²

This reference is from the paper presented by Professor C. Torben Thomsen, Accounting As a Universal Network Language; Da Dante, per Pacioli, Al Futuro at the 17th Annual Congress of the European Accounting Association, Venice, Italy. As he writes in the first chapter of his book: I have compiled it for this purpose only, i.e. that they (the subjects) may whenever necessary find in it everything with regard to accounts and their keeping. And thereby I wish to give them enough rules to enable them to keep all their accounts and books in an orderly way.³

When one goes through all the 36 chapters then one finds that the whole part that dealt with the bookkeeping does not show any examples. It provides only the theoretical descriptions.

Chapter 1 is titled as : OF THOSE THINGS THAT ARE NECESSARY TO THE REAL MERCHANT AND THE METHOD OF KEEPING A LEDGER WITH ITS JOURNAL WELL, IN VENICE AND ANYWHERE ELSE.

Describes the three important points i.e. cash or any equivalent, the second thing necessary in business is to be a good bookkeeper and ready mathematician and the third is to arrange all the transactions in such a systematic way that one may understand each one of them at a glance, i.e. by the debit (Debito owed to) and credit (Credito owed by) method. He further divided this treatise in two principal parts. The one is inventory and the other is disposition (arrangement).

In writing this chapter he has used the language as he was teaching in a classroom.

Chapter 2 is titled as : FIRST PART OF THIS TREATISE, which is called inventory WHAT INVENTORY IS, AND HOW TO MAKE IT

Every bookkeeper should start his writing of book in the name of God as the purpose of every merchant is to make a lawful and reasonable profit to keep up his business. He further describes that a person should write down his most valuable personal things like cash, jewels, silver etc., which are easily lost on a paper. For the real estate he was not so worried as he has written that houses, lands, lakes and ponds cannot be lost as personal property. This chapter shows that the period in which this book was compiled the concept of merchant and the business as a separate entity was not developed.

Chapter 3 is titled as : EXAMPLE OF AN INVENTORY WITH ALL ITS FORMAL REQUIREMENTS

He has started this chapter in the name of God with date and place. In this example he has classified the inventory items by citing 15 items. Most of these items are the personal belongings, i.e. first items are cash, gold coins of different countries. Second item: unset

jewels and set jewels in ornaments in quantity. Third item: Clothes with their quality and number with colors. Fourth item: Number of silverware with kind and weight. Fifth item: Number of bed sheets, table-clothes, handkerchiefs with kind and quality. Sixth item: Feather beds and pillows with their cases and marks. Seventh item: Goods of different kind as number of ginger michino, with weight mark and describing each kind of said goods with all their marks. Eighth item: Number of sacks of pepper, long pepper or round pepper and number of packages of cinnamon etc. Ninth item: Number of skins with coverings and kind with type of quality. Tenth item: Number of fine skins and number of leather goods. Eleventh item: Description of real estate in detail. Twelfth item: Details of pieces of land under cultivation. Thirteenth item: Details of bank deposits in Venice or elsewhere. Fourteenth item: Details regarding debtors. Fifteenth item: Details of creditors.

Most of the items included in the above division are related with the personal use of the merchant. By the analysis of the whole chapter one comes to the conclusion that the whole distribution of items was made for the purpose of listing of items to keep the record.

Chapter 4 is titled as : VERY USEFUL ADMONTION AND GOOD ADVICE TO THE GOOD MERCHANT

In this chapter Pacioli has again given instructions to the merchants regarding the listing of inventory whether the list is of ten thousand items.

Chapter 5 is titled as : SECOND PRINCIPAL PART OF THIS TREATISE NAMED DISPOSITION (ARRANGEMENT) WHAT IS UNDERSTOOD BY IT- WHAT IT CONSISTS OF IN BUSINESS, AND THE THREE PRINCIPAL BOOKS OF THE MERCHANT.

Luca Pacioli has divided disposition in two parts as commerce in general and store in particular. Immediately after the inventory he writes three names of the books called Memorandum (Memoriale), the Journal (Giornale) and the third Ledger (Quaderno). For small business use of last two books is advised.

Chapter 6 is titled as : OF THE FIRST BOOK, WHICH IS CALLED MEMORANDUM BOOK, OR SCRAP BOOK, OR BLOTTER. WHAT IS UNDERSTOOD BY IT AND HOW ENTRIES SHOULD BE MADE IN IT AND BY WHOM.

In this book the merchant shall put down all his transactions, small or big, as they are, as they take place, day by day, hour by hour by any one without any technicality with as much details as he or she can. Memorandum books should have a distinguishing mark at the top of these to locate the recorded transactions easily when the details are needed.

Chapter 7 is titled as : OF THE MANNER IN WHICH IN MANY PLACES MERCANTILE BOOKS ARE AUTHENTICATED, WHY AND BY WHOM.

Luca writes about the procedure of authentication of the books by a mercantile officer in the city in this chapter. The person who writes the books should describe about himself and if a different person makes some of the entries then the details of the person should also be mentioned along with the date and place. He also writes that many keep their books in duplicate to show one to the buyer and the other to the seller, and he describes it a bad practice.

Chapter 8 is titled as : HOW ENTRIES SHOULD BE MADE IN THE SAID MEMORANDUM BOOK, AND EXAMPLES OF THE SAME.

While recording the details of the transactions in this book the author advises that the details regarding the presence and the talks of other persons at the time of the deal may also be written in the book.

Chapter 9 is titled as : OF NINE WAYS IN WHICH THE MERCHANT USUALLY BUYS, AND THE GOODS WHICH IT S MORE OR LESS NECESSARY TO BUY ON TIME.

In this chapter eight ways of buying the things in cash and the other seven ways have been elaborated. The details of purchases and its way should be mentioned in the Memorandum book. To illustrate he has given an example of purchase and after that he has mentioned that the selling may also be in the same manner without any example or details.

Chapter 10 is titled as : THE SECOND IMPORTANT MERCANTILE BOOK WHICH IS CALLED JOURNAL; WHAT IT IS AND HOW IT SHOULD BE KEPT IN AN ORDERLY WAY.

In this chapter the author has described about the second mercantile book, i.e. The Journal. He writes in this chapter that journal is the private book of the merchant. The entries should be neater and more systematic in manner.

Chapter 11 is titled as : THE TWO EXPRESSIONS USED IN THE JOURNAL, ESPECIALLY IN VENICE, THE ONE CALLED PER, AND THE OTHER A AND WHAT IS UNDERSTOOD BY THEM.

In this chapter of Treatise two expressions used in said Journal: one is called Per, the other A, each having a different meaning. Per always denotes a debtor, or one or more as there may be: and by A is denoted the creditor, or one or more as there may be. At the start of the entry expression Per is always used. In this chapter Pacioli states that the debit entry must be separated from its corresponding credit entry by two small lines. These have apparently been accidentally omitted by the printers in the bookkeeping examples of the original, and should probably have appeared thus -⁴

"Per" Cash // "A" Capital.

Chapter 12 is titled as : HOW THE ENTRY SHOULD BE MADE INTO THE JOURNAL BY MEANS OF THE DEBIT AND THE CREDIT, WITH MANY EXAMPLES. THE TWO OTHER EXPRESSIONS USED IN THE LEDGER, THE ONE CALLED CASH, AND THE OTHER CALLED CAPITAL, AND WHAT SHOULD BE UNDERSTOOD BY THEM.

In this chapter he has introduced how to write up the inventory; that is, the quantity of money into the Ledger and Journal. He has also introduced the terms called Cash which meant the share one has with him and Capital is understood all the possessions in the form of inventory. Example of Posting in Journal:

8th of November, MCCCCLXXXIII.

VENICE.

Per Cash // A Capital of myself for so much cash etc., which I have in such and such place, in gold, coin, silver, and copper of various coinage as appears in the Inventory sheet posted in

cash, in all so many ducats in gold, and in coins, so many ducats. In our Venetian money it is all valued in gold, that is, in grossi 24 per ducat, and in piccoli 32 per grosso, so many gold lire.

L...(lire) S...(soldi) G...(grossi) P...(piccoli)

So this is that one entry which was given by Luca Pacioli in his famous book.

Chapter 13 is titled as : THIRD AND LAST PRINCIPAL MERCANTILE BOOK CALLED THE LEDGER. HOW IT IS TO BE KEPT. ITS ALPHABET (INDEX), AND HOW THIS CAN BE KEPT SINGLE AND DOUBLE.

In this chapter again the cash has been given the much more importance than other inventories. As in the Journal the first entry is always of cash and as is the case here in the principal book of accounts, that is, the Ledger. The whole page must be left to cash, not entering therein anything else, as the cash is handled more frequently than any other item.

Chapter 14 is titled as : HOW THW ENTRIES SHOULD BE TRANSFERRED FROM THE JOURNAL INTO THE LEDGER AND WHY, FOR EACH ENTRY OF THE JOURNAL, YOU HAVE TO MAKE TWO IN THE LEDGER, HOW ENTRIES IN THE JOURNAL SHOULD BE CANCELLED. THE TWO NUMBERS OF THE PAGES OF THE LEDGER WHICH ARE PLACED IN THE MARGIN OF EACH ENTRY AND WHY.

For each entry in the journal there are two in the ledger. That is one in the debit and the other in the credit. While posting to the Ledger journal entry should be marked in two diagonal lines. As posting of the debit entry is made the marking is made as the case with the credit entry. In Journal date is put at the beginning of the day but in the ledger the date column is in margin as these entries are in the different dates. Totals of the debit and the credit side should always be same otherwise there is some mistake.

Chapter 15 is titled as : THE WAY IN WHICH THE CASH AND CAPITAL ENTRIES SHOULD BE POSTED IN THE LEDGER IN THE DEBIT AND THE CREDIT. THE DATE WHICH AT THE TOP OF THE PAGE IS WRITTEN DOWN ACCORDING TO THE ANCIENT USE. CHANGING OF THE SAME. HOW TO DIVIDE THE SPACE ON THE PAGES FOR SMALL AND LARGE ACCOUNTS AS THE BUSINESS REQUIRES.

Following example regarding the posting of the Journal entry in the Ledger is being given by Luca Pacioli:

Jesus.... MCCCCLXXXIII.

Cash as debtor, the 8th day of November per Capital for cash of different kinds I find I have in amounts of gold and other coins: page two

LXm(10,000).... S.... G.... P....

After posting of entry in the Ledger and noted in the Journal the repertory in alphabetical order should be placed at the ledger entries.

Chapter 16 is titled as : HOW THE ENQUIRIES RELATIVE TO THE MERCHANDISE OF WHICH ONE IS POSSESSED ACCORDING TO HIS INVENTORY, OR OTHERWISE, SHOULD BE MADE IN THE LEDGER BOTH IN THE DEBIT AND CREDIT.

Most of the expressions provided in this chapter are the repetitions of the previous chapters.

Chapter 17 is titled as : HOW TO KEEP ACCOUNTS WITH PUBLIC OFFICES, AND WHY. THE CAMERA DE L'IMPRESTI (MUNICIPAL LOAN BANK) IN VENICE, WHICH IS MANAGED BY SESTIERI (DISTRICTS)

Comments on the public offices have been made in this chapter by the author. He has also given some hints to keep the books of accounts with the public offices as they change the clerks frequently.

Chapter 18 is titled as : HOW YOU SHOULD KEEP YOUR ACCOUNTS WITH THE OFFICE OF THE MESSETARIA IN VENICE. HOW TO MAKE ENTRIES PERTAINING THERETO IN THE MEMORANDUM BOOK, JOURNAL AND LEDGER, AND ABOUT LOANS.

In this chapter the entries in the Memorandum book, the Journal and in the Ledger with the transactions with the Messetaria (exchange office) have been illustrated with the examples.

In Chapter 15 and 18 of Pacioli, the terms for the left side and the right side of the ledger are rendered by Geijsbeek as *dee dare* and *dee havere* respectively. While it is clear that both words represent the future tense, Pacioli uses the terms *die dare* and *die hauere*. He also uses *dien dare*. In spite of this variation of use in the archaic Italian, the simple illustrations in this paper uniformly use the *ters de dare* and *de avere*. In modern Italian, variants of these terms might be used.⁵

Chapter 19 is titled as : HOW WE SHOULD MAKE THE ENTRIES IN OUR PRINCIPAL BOOKS OF THE PAYMENTS THAT WE HAVE TO MAKE EITHER BY DRAFT OR THROUGH THE BANK.

Methods of payments of purchases in different and safest form have been discussed in this Chapter. Entries regarding these payments have also been discussed theoretically.

Chapter 20 is titled as : ENTRIES FOR THE WELL KNOWN AND PECULIAR MERCANTILE CUSTOMS OF TRADING AND PARTNERSHIP, ETC. HOW THEY SHOULD BE ENTERED IN THE MERCANTILE BOOKS. FIRST, SIMPLE TRADINGS, THEN COMPLEX TRADINGS AND EXAMPLES OF ENTRIES FOR THEM IN THE MEMORANDUM BOOK, JOURNAL & LEDGER.

Trades have been divided into three categories mainly as simple, complex and time in this chapter. Procedure for recording the transactions of all the three categories of trade in all the three books has been illustrated. Trading partnership and maintaining the accounts thereof has been described in this chapter.

Chapter 21 is titled as : THE OTHER WELL-KNOWN ENTRY CALLED PARTNERSHIP. HOW IT SHOULD BE WRITTEN IN EACH BOOK IN THE PROPER MANNER.

In this Chapter Luca Pacioli has advised to keep all the business in the same books by putting down new entries for the new partnership business. Details of the partnership agreement or any instrument should be recorded in the Memorandum book. After making the entries in the Memorandum book, necessary entries should be recorded in the Journal and posting should be made in the Ledger.

Chapter 22 is titled as : REGARDING THE ENTRIES OF EVERY KIND OF EXPENSE, AS FOR INSTANCE HOUSEHOLD EXPENSES, ORDINARY OR EXTRAORDINARY, MERCANTILE EXPENSES, WAGES OF CLERKS AND APPRENTICES. HOW THEY SHOULD BE ENTERED IN THE BOOKS.

Withdrawals for household expenses are grouped under this head and sundry expenses for business are grouped under the head mercantile expenses. One example for the entry of household expenses and another example for the entry of mercantile expenses have been illustrated in this Chapter.

Chapter 23 is titled as : IN WHAT MANNER THE ACCOUNTS OF A STORE SHOULD BE KEPT. WHETHER THE STORE IS UNDER YOUR CARE OR THE CARE OF OTHER PEOPLE. HOW THE ACCOUNTS SHOULD BE ENTERED IN THE AUTHENTIC BOOKS OF THE OWNER SEPARATE FROM THOSE OF THE STORE ITSELF.

Precautionary measures regarding the keeping of books have been elaborated in this chapter. Most of the parts of this chapter are repetitions of the previous chapters.

Chapter 24 is titled as : HOW YOU SHOULD KEEP IN THE JOURNAL AND LEDGER. THE ACCOUNTS WITH THE BANK. WHAT IS UNDERSTOOD BY THEM. BILLS OF EXCHANGE WHETHER YOU DEAL WITH A BANK OR YOURSELF ARE A BANKER. RECEIPTS FOR DRAFTS- WHAT IS UNDERSTOOD BY THEM AND WHY THEY ARE MADE OUT IN DUPLICATE.

Banking transactions have been defined and the entries regarding payments have also been shown. Entries as regards bankers and as a customer have been illustrated in this section.

Chapter 25 is titled as : ANOTHER ACCOUNT WHICH IS USUALLY KEPT IN THE LEDGER, CALLED INCOME & EXPENSES, FOR WHICH OFTEN A SEPARATE BOOK IS USED, AND WHY.

He has given the prevailing practices of charging extraordinary expenses to the income and expenditure account. He also advises against the use of this account and writes in favour of household expenses account. Even if income and expenditure account is maintained the balance should be transferred to the capital account.

Chapter 26 is titled as : HOW ENTRIES SHOULD BE MADE IN MERCANTILE BOOKS RELATIVE TO TRIPS WHICH YOU CONDUCT YOURSELF OR YOU ENTRUST TO OTHER PEOPLE, AND THE TWO LEDGERS RESULTING THEREFROM.

Two separate accounts are advised for traveling by himself and or by any person on behalf of the merchant. Whatever is given to the other person he should record and summary should be provided to the sender.

Chapter 27 is titled as : ANOTHER WELL-KNOWN ACCOUNT NAMED PROFIT AND LOSS, OR PROFIT AND DEFICIT. HOW IT SHOULD BE KEPT IN THE LEDGER AND WHY IT IS NOT KEPT IN THE JOURNAL AS THE OTHER ACCOUNTS.

He has written regarding the profit or loss: In opening the account you shall say as follows: Profit and Loss debit and Profit and Loss credit. That is, if you sustained a loss in any particular goods, in which account in your Ledger the debit would show more than the

entries in twelfth chapter a colon is used for the separation between the debit and the credit.

Morison [1933, p. 5] quotes Dr. David Eugene Smith, Emeritus Professor of the History of Mathematics at Columbia University: Pacioli was essentially a compiler, and even so he lacked in critical ability and the accuracy of statement. This is probably most clearly demonstrated by Pacioli completely omitting an explanation of how to determine the profit when closing a merchandise account. For all other accounts the balance is simply carried forward. But since sales are entered at their selling prices on the credit side of the merchandise account, one cannot find the profit without first entering the ending balance to be carried forward. He thoroughly explains all the mechanics of the keeping of the books, but on this critical point, he is silent.⁷ The book is more theoretical compilation rather than illustrative. Instead of calling 36 chapters, these should have been 36 paragraphs of one chapter regarding bookkeeping. Some of the chapters are too small to be called as a Chapter.

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ECONOMIC VALUE ADDED - SELECTED REVIEWS AND EMPEIRICAL FINDINGS

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ABSTRACT

EVA attempts to understand whether a business creates sufficient surplus to cover the cost of its capital, thus bringing in shareholders expectation into value creation. The present write-up is a collection of some very interesting comments made by Stern (1990, 1997); Easton, Harris and Ohlson (1992); Vessel (1993); Stewart III (1994); Riley (1995); Rice (1996); Milunovich and Tsuci (1996); Ruggiero (1996); Morgan (1996); Jackson (1996); Tobias (1996) and Bacidore, Boquest, Milbourn and Thakor (1997). The write-up also includes the empirical findings of a few research work done on the theoretical relationship of EVA to the other financial fundamentals. The studies which have been included are : Banerjee (1997, 1999 and 2000); KPMG-BS (1998); Banerjee and Jain (1999); Bao and Bao (1999); Parasuram (2000); Thenmozhi (2000) and Thamby and Beheli (2001).

The concept of value addition has been evolved for the measurement of wealth created by an organization and it is considered as an approach for the measurement of performance in terms of operational efficiency and profitability of a business. The concept of value addition may be viewed from two different angles: (i) value addition for the stakeholders, customers and for the community at large which can be measured in terms of Gross Value Added (GVA) and Net Value Added (NVA). It can be used to indicate the overall performance of an enterprise instead of profit only; and, (ii) value addition for the shareholders (i.e. owners) which can be measured in terms of Cash Value Added (CVA) as suggested by Holt Value Associates, Shareholders Value Added (SVA) as developed by Rapport and Lek/Alcar Consulting Group and Economic Value Added as postulated by Stern & Stewart Consulting Co. etc.. Stewart (1991) coined the term Market Value Added (MVA) to measure shareholders wealth. MVA is defined as the absolute rupee spread between a company's market value and its invested capital. As debts are mostly not marketed, the market value of debt is not readily available. Therefore, definition of MVA may be modified as follows: MVA is the excess of market

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capitalization over and above the equity shareholders equity (i.e. Equity Share Capital + Reserves and Surplus). Thus,

$MVA = \text{Market capitalization} - (\text{Equity shareholder} + \text{Reserve and Surplus}).$

It has been argued by many experts that EVA is not the ultimate measure of corporate performance. The long-term success of management of a firm can best be measured by MVA. However, MVA cannot be computed for private-owned firms and non-profit companies because shares of those companies cannot be traded. Moreover, MVA can be viewed as a useful performance measure only at the top level organisation but not at the subsidiary level.

EVA - SOME QUOTES

'As a performance measure EVA comes to closer than any other tool to capture the true economic profit of an enterprise. It is directly linked to the creation of the shareholders wealth over time. EVA-based financial management and incentive system gives manager superior information and motivation to make decisions that will create the greatest shareholder private enterprise'.¹

- Stern, J. (1990)

'Economic Value Added (EVA) is an increasingly popular corporate performance measure- one that is often used by companies not only for evaluating performance, but also as a basis for determining incentive pay. Like other performance measures, EVA attempts to cope with the basic tension that exists between the need to come up with a performance measure that is highly correlated with shareholders wealth, but at the same time somewhat less subject to the random fluctuations in stock prices. This is a difficult tension to resolve, and it explains the relatively low correlations of all accounting based performance measures with stock returns, at least on a year-to-year basis'.²

- Easton, P., Harris, T. and Ohlson, J. (1992)

'We like to invest in companies that use EVA and similar measures. Making higher return than the cost of capital is how we look at the world'.³

- Vessel, E. (1993)

'EVA is a powerful new management tool that has gained growing international acceptance as the standard of corporate governance. It serves as the centrepiece of a completely integrated framework of financial management and incentive compensation'.⁴

- Stewart, III. and Benett, G. (1994)

'EVA brings together all aspects of the business into one measure. It changes the focus from the traditional government culture. We will learn to grow revenue only when it is profitable, to invest more only when it produces a good return, and to reduce expenses only when it does not hurt service'.⁵

- Riley M.J. (1995)

'Previously we used several measurements to gauge our financial outlook from earnings per share to discounted cash flow and return on average assets. With EVA, I saw a way to meet our business objectives and create a new corporate culture. It permeates every level at varity, from Boardroom to the Shop floor. Bonuses of all managers are determined solely by whether varity achieves its EVA targets. At our company every decision and every action result from analysis that uses EVA principles; we focus on ensuring that every investment produces a return that exceeds our cost of capital. We believe this approach enables us to directly align management and shareholders interest'.⁶

- Rice, V.A. (1996)

'Although EVA is not a panacea, the measure can become an essential management tool. When properly implemented, EVA forms the backbone of a powerful management approach. EVA instils capital discipline by forcing managers to consider the actual cost of the capital they employ. Thus, EVA encourages managers to act as owners. Linking management compensation to EVA generation reinforces this relationship'.⁷

- Milunovich, S. and Tsuci, A. (1996)

'The EVA approach revealed many insights about the performance of business units which had been unnoticed or obscured by the more traditional measures of profit growth, profit margin, revenue growth and EPS growth'.⁸

- Ruggiero, A.W. (1996)

'In 1993 and 1994, we attended several Stern and Stewart conferences and in December, 1994 we committed to EVA training of our executives. We feel it offered an opportunity to fill in the missing gaps that we had in our officials. It allowed us to take a long, hard look at operating costs, which are now fully understood, and capital charges. We had very difficult time trying to figure out how to actively compare and measure results across the disparity of our different business units. Linking EVA to ABM allowed us to do that'.⁹

Morgan, C.D. (1996)

'What do I see as advantages of using EVA? It measures the required economic return on all invested capital. It makes you to invest in positive spread projects, and it gets you to eliminate operations where returns are negative. It gets management to think about how you manage the capital in the business'.¹⁰

- Jackson, A. (1996)

'As we are making decisions we have got to think about aligning them with EVA. It is very easy to see EVA as a very sophisticated financial tool, and indeed it is, but I think it is important to understand that it is really a tool to change behaviour too. Linking bonuses to EVA is meant to change the whole culture'.¹¹

- Tobias, R. (1996)

'EVA as a tool of financial management was neither just a US phenomenon nor it is limited to for profits organisations. It had been put to use for management performance

evaluation for imposing scarce capital allocation and for valuation of target company at the time of acquisition. It strengthens management incentives in a way that does not dilute shareholder interest'.¹²

- Stern, J. (1997)

'By subjecting Total Quality Management (TQM) to the discipline of EVA, management is in a better position to ensure that its investment in TQM is translating into increased shareholder value. At the same time, a TQM Programme tempered by EVA can help managers to ensure that they are not under investing in their non- shareholder stakeholders'.¹³

- Bacidore, J.M., Boquist, J.A., Milbourn, T.T. and Thakor A.V. (1997)

'If EVA-based NPV (Net Present Value) and cash-flow based NPV are identical, why is it that EVA is useful for compensation and NPV is not? The reason is that one needs flow measures of performance for periodic compensation since compensation is designed to provide a flow of rewards. EVA is a flow measure, whereas NPV is a stock measure. Moreover, of the available flow measures, EVA is the only one that explicitly takes into account the cost of capital provided by shareholders. In this respect, it is superior to another flow measure, cash flow'.¹⁴

- Bacidore, J.M., Boquist, J.A., Milbourn, T.T. and Thakor, A.V. (1997)

EVA - Some EMPIRICAL FINDINGS

1) Banerjee, A. (1997) : The study selected 10 industries in India taking 4/5 companies from each industry to examine whether EVA is equally available in Indian condition. The study mainly attempted to find the superiority of EVA over ROI. The study shows that companies having identical ROI report significantly different EVAs. EVA has been viewed as the centrepiece of a comprehensive financial measurement system. The study has also found the Indian companies slowly recognising the importance of EVA and attempting to use it as a better discloser practice.¹⁵

2) KPMG-BS Study (1998) : The study assessed top 100 companies on EVA, sales, PAT and MVA criteria. The survey has used the BS-1000 list of companies using a composite index comprising sales, profitability and compounded annual growth rate of those companies covering the period 1996-97. Sixty companies have been found able to create positive shareholder value whereas 38 companies have been found to destroy it. Accounting numbers have failed to capture shareholder value creation or destruction as per the findings of the study. 24 companies have destroyed shareholder value by reporting negative MVA.¹⁶

3) Banerjee, A. and Jain, S.C. (1999) : The researches conducted a study to find the relationship between shareholder wealth and certain financial variables. Five independent variables, viz. Earnings Per Share (EPS), Average Return on Net Worth (ARONW), Capital Productivity (Kp), Labour Productivity (Lp) and Economic Value Added (EVA) have been chosen to establish the relationship with Market Value Added (MVA), the shareholder wealth surrogate. Top 50 companies from the Drugs and Pharmaceuticals Industry on India were

chosen as sample companies and data were collected for a period of 8 years from 1990-91 to 1997-98.

In five years of the study period EVA turned out to be the most significant predictor of MVA. Traditional accounting measures like EPS and ARONW have insignificant relationship with shareholder wealth. In the said study EVA figures were computed by the researchers whereas EPS, ARONW were disclosed information.¹⁷

4) Banerjee, A. (1999) : In line of a previous work conducted by the same researcher, the present study attempts to explore the supremacy of EVA over other variables in explaining the stock price performance. Five independent variables, viz. EPS, ARONW, Kp, Lp and EVA are chosen to establish the relationship with MVA. Nine industries have been chosen for the study with varied number of companies from year to year. Necessary data to compute the above variables are collected for a period of 8 years from 1990-91 to 1997-98. The study concludes that EVA is an important explanatory variable of the shareholder wealth. The study has also found the companies, which have started disclosing EVA results in their Annual Reports to face a direct impact on stock prices. The two variables relating to productivity- capital and labour have been found as better predictors than the traditional measures like EPS and ARONW. The correlation coefficient results were found to be the highest between EVA and MVA in five years of the study.¹⁸

5) Bao, B.H. and Bao, D.H. (1999) : The study reveals the association between EVA and the value of the Indian firms which are included in the COMPUSTAT- Global Vantage database. The results of the study show that the EVA is positively and significantly correlated with the firm value. They are consistent with the theory in that firms with EVA created value and firms with higher created value have higher stock prices. The study also reveals that explanatory power of EVA is lower than that of earnings and book value of firms under consideration.¹⁹

6) Parasuram, N.R. (2000) : The study covers the position of 14 major public sector banks, 7 new private sector banks, 5 old private sector banks and 2 foreign banks. Among the strength indicators, deposit, return on assets, interest income as a percentage of total assets, interest yield spread as a percentage of total assets and EVA were considered. The study concludes that EVA is an important measure to judge a bank performance in view of the current scenario of banks. EVA has been found to have a high degree of correlation with ROA but not with any of the other measures. It signifies a fact that banks realise the importance of measuring EVA separately even if they do well on other fields. Some of the banks which have high net profit and otherwise ranked high have been found to have a negative EVA. The study expects that EVA will soon displace other measures of bank performance.²⁰

7) Banerjee, A. (2000) : The study selected 200 companies across industries in India spanning over a period from 1993-94 to 1997-98. The study observed a huge gap in many cases between actual market value and the sum total of Current Operational Value (COV) and Future Growth Value (FGV). The results also show that independent variables (COV & FGV)

significantly explain the variation in market value. The study observed that market value of a firm could be well-predicted by future EVA streams.²¹

8) Thenmozhi, M. (2000) : In order to have an understanding of how the traditional performance measures are comparable to EVA, data of three financial years between 1996 and 1999 were chosen from 28 companies. Only 6 out of the 28 companies have positive EVA while the others have negative. The EVA as a percentage of capital employed (EVA/CE) has been found to indicate the true return on capital employed. Comparing EVA with other traditional performance measures the study indicates that all the companies depict a rosy picture in terms of EPS, RONA and ROCE for all the three years. The study shows that the traditional measures do not reflect the real value of shareholders and EVA has to be measured to have an idea about the shareholders value.²²

9) Thampy, A. and Beheli, R. (2001) : The study measures the Economic Value Addition (EVA) by Indian commercial banks in the public and private sectors during 1990 s. It also moves the benchmark of performance of banks from accounting profits to economic profits and shareholder wealth creation. The study has been restricted to 12 commercial banks consisting of 4 public and 8 private sector banks. The period covered under the study is three years starting from 1995-96 to 1997-98. Beta has been calculated on the basis of daily stock price data with Bombay Stock Exchange's BSE 200 index returns during January 1, 1997 to March 31, 1998 as the proxy for the market returns. The study shows that the performance of the Indian banks as measured by EVA is not very satisfactory. The results of the study reveal that the commercial banks under consideration have not created any positive EVA. The study indicates two possible reasons for the creation of inadequate positive EVA : (a) banks could be overcapitalised and (b) returns are very poor from banking business. It also suggests that banks should improve and strengthen their credit assessment technique and monitoring mechanism to bring down the non-performing assets so as to improve the earning capacity.²³

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VALUATION OF BUSINESS AND BRAND VALUE

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ABSTRACT

Accountants and auditors are very familiar to valuation of assets but while talking about classification and valuation of intangible assets, they are not so familiar. Interestingly, commercial success is now depending more on intangible assets which has proved problematic for accountants. This paper makes an attempt to analyse issues relating to rationale, valuation bases and capitalisation of internally developed brands.

Valuation of Intellectual Property and Brand valuation¹ is a new subject which is developing fast as value of business much depends upon brand value than any other tangible asset. The sweeping wave of globalization riding on the wings of new technology has compelled developed economies to search for new markets for their products and services intensifying the competition leading to the development of brand name, customer loyalty and brand equity. This was true only a decade ago. The global companies that are admired by Chief Executive Officers (CEOs) are known by the most recognised brand names.² Brand Value is a demand of time and as Victor Hugo said no power on earth can stop an idea whose time has come.³ To value the brand, at first it is essential to define it, but due to its ineffable quality it is very difficult to define it in precise language of accounting. It can be defined as a name, term, sign, symbol, or design, or a combination of them intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors.⁴ It is not easy to make valuation of brand but, problem has more intensified as accountants hesitates to show all expenses as goodwill or other intangible assets which is the main hurdle in valuation of brand. It is rightly observed that the traditional wisdom of accounting has been to keep the non-acquired intangible assets off the balance sheet and valuation has never been in the fort of the accountants. Accounting has been concerned with measurements and historical cost has been the base for it owing to verifiability and reliability for acquired intangible assets.⁵

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WHY VALUE THE BRAND ?

Valuation of brand is essential as in some cases its value is measured in millions and even in billions of Rupee and it is now possible also as in the present era level of information and knowledge has gone up. Knowledge is the cornerstone of societal leadership. This would, hopefully, help to produce scales of measurement and tools of recording and techniques of analysis to understand the universe of accounting language.⁶ Against this background following are the main reason for placing a value on a brand-

1. **To Measure Value of Business** : It is observed that many times value of some shares is shoot up more than proportionate increase in earnings. As a result of it, Price Earnings Ratio (PE) is increasing continuously. It happens due to enhanced brand value. Thus, valuation of brand is essential to measure value of business.
2. **To Recognise huge Marketing Efforts** : Global companies are incurring huge expenditure on marketing to popularise their brand which is increasing their profits in turn. Thus, brand is an asset which increases profitability.
3. **Protection of Brand is more needed than any other asset** : After the episode of *Basmati rice even haldi-dudh* is registered as wound-healing and *Jaumn, Karela* is registered as antidiabetic agents in the name of others though Indians were using it since time immemorial. So, like any other asset, if once a product or process is developed it should be protected through registration.
4. **Market for Brand is Increasing** : Like any other asset brands are purchased and sold and market for brand is growing, so both, buyers and sellers must assess the value of brand which they are exchanging.
5. **Value of Brand is more precious compared to any other asset** : More and more Indian companies are on a buying spree for well-established foreign brands by paying a huge amount of money too late in the day. The brands included on the buying lists are : global rights for Louis Philippe, Peter England (except UK and Ireland) and Allen Solly (except US). AB Birla group, after the acquisition of the Indian operations of Coats Viyella PIC - a UK-based company, is acquiring global brand right from it though it had acquired such rights for the Middle East and SAARC regions for Rs. 47 crores. Madura Garments, the garment division of the Indian Rayon, had acquired the garment business of Madura Coats for Rs. 189.23 crores in December 1999. The turnover of Madura Garments, the company's garment division, was Rs. 92 crore during the period.⁷
6. **There is a Accounting Standard for it** : In 1990, the ASC issued TR 780 and stated that cost of brand value can be measured independently of goodwill but shortly thereafter it issued an Exposure Draft (ED 52) stating that brands should be included within goodwill. Thus, according to Accounting Standard Committee (ASC) brands are really a form of goodwill and should be accounted as such. Main guidelines of TR 780 (Accounting for Intangible Fixed Asset) stated that :

an intangible fixed asset should be recognised in the balance sheet as a fixed asset in its own right if and only if :

- *either the historical costs incurred in creating it are known or it can be clearly demonstrated that they are readily ascertainable; and*
- *Its characteristics can be clearly distinguished from those of goodwill asset; and*
- *Its cost can be measured independently of goodwill of other assets and of the earnings of the relevant business or business segment.*

(ASC Report, 1990, p. 153)

It further stated that, brands may be of considerable value of the business but it is seldom meaningful to recognise them individually for accounting purposes since the benefits from them are derived when they are used in conjunction with the assets and characteristics which go to make up the business.⁸ Still there is a need to reach at generally acceptable method for valuation of brand. In this respect Sherer rightly mentioned that the brands issue is part of a larger debate which might be assisted by a conceptual framework for accounting.⁹

BASIS OF VALUATION OF BRANDS

No doubt, brand value is widely recognised but in practice it is very difficult to disentangle its benefit from the gains occurring to other assets such as technical know-how, expenses on promotional momentum and other business relationship. If it is separated from other assets then also it is not easy due to multiplicity of valuation methods.

1. **Historical Cost Basis :** This method is based on objectivity in financial statement and if some brand value is acquired then cost determined according to this manner is quite similar to the cost of any other fixed assets. Here also it may be difficult to incorporate cost of improvement in the brand value which is equally important. According to a separate IAS on Agricultural Marketing it is agreed that cost of land should also include cost of leveling and improving land for cultivation, in the same manner brand value should include cost of its improvement also. When cost is not paid in terms of Rupee, it is better to use cost of exchange and not the cost of acquisition.

In this respect Accounting Principal Board (APB) opined that -

- a. *An asset acquired by exchanging cash or other assets is recorded at cost - that is, at the amount of cash disbursed or the fair value of the other assets distributed.*
- b. *An asset acquired by liabilities is recorded at cost - that is, the present value of the amounts to be paid.*
- c. *An asset acquired by issuing shares of stock of the acquiring corporation is recorded at the fair value of the asset - that is, shares of stock issued are recorded at the fair value of the consideration received for the stock.*

If acquired brands are valued at purchase price, then valuing self-created brands by apportioning historical costs would be against uniformity. Even if one accepts future profitability as the basis of valuing both types of brands, it inevitably brings an element of uncertainty to the financial information in the balance-sheet. And unless a dual method of accounting is consciously accepted, fixed assets cannot be valued on a historical cost as well as current cost or purchase price basis, depending on the type of asset. 10 According to IAS 37 an intangible asset should be recognised if cost of the asset can be measured reliably.

2. Economic Value Basis : The economic value of an asset is the value which buyer is ready to pay or the value which seller should get. Since different person are having different mind to pay, it may be different for different people. It may be present value of future profits, market value, replacement value or realisable value or combination of all such values. A few are discussed as follows.

- (i) **Present Value Basis :** This is also known as Potential Earning Basis. In this method value of a brand can be ascertained in the same manner as value of a project is determined on the basis of Discounted Cash Flow Method (Net Present Value Method and Internal Rate of Return). In this method yearly revenue attributable to brand is estimated and then it is discounted at a rate which is difficult so this method is not so preferred.
- (ii) **Present Value of Super Profits :** This method is quite similar to present value (PV) method as discussed above but in this method, in stead of taking present value of future profits, excess of future profits using brand compared to profits without using brand is considered. This can be computed as follows-

$$\text{Value of brand} = \Sigma (Y_1 + Y_2 + Y_3 + \dots Y_n)$$

$$\text{Where PV of super profit for nth year} = (Y_n) = \frac{(p_b \times Q_b) - (p_u \times Q_u)}{(1 + i)^n}$$

p_b and Q_b are price and quantity of branded product

P_u and Q_u are price and quantity of unbranded product

$(1 + i)^n$ is a discounting factor

- (3) **Entry Value Basis :** It shows total cash outflow and cost of other resources if same brand or its equivalent is obtained. There are three variant of it as follows-
 - (i) **Reproduction Cost Method :** According to this method value of brand can be taken equal to the amount which will be spent if a brand is developed in the Organisation having a capacity to generate same profits and popularity as of existing brand.
 - (ii) **Replacing Brand Method :** According to this method value of brand is equal to the amount which will be required to purchase identical brand from external sources. This method is not suitable as it is hard to find two identical brands.

- (iii) **Replacing Production Capacity** : In this method value of brand is taken equal to cash or other considerations with will be required to replace the existing production capacity which reflects adoption of new technology also.

There is a common feature in all these three notions that all the three correspond to ascertainment of cost of replacement or reproduction which is not easy so for valuation of brand other methods viz. market price, management estimate and multiple criteria methods are used.

- (4) **Exit Value Basis** : It is also known as realisable value of brand which shows at what price brand can be sold in open market. As market for brand value is not yet established it is difficult to obtain such price.
- (5) **Branded Value Based on Market Value of the Share** : Though, market for brand value is not established, share market is well established. Shares of the company selling branded product is quoted frequently which can form basis for valuation of brand. Method for computation of book value of share is well established. It is observed that if brand value is created, market value of the share will be quite high compared to its book value. So, brand value can be computed by multiplying number of shares to difference between market price and book value of share as follows.

$$\text{Value of Brand} = (N \times V_m) - (N \times V_b) = N(V_m - V_b)$$

Where :

N = Number of Shares of the Company

V_m = Market value of the share

V_b = Book value of the share

- (6) **Multiple Criteria Method** : As it is clear from its name, in this method many factors are considered for valuation of brand which is obvious considering complex nature of brand valuation. Proponents of this method used market opportunity concept for valuation of brand. "The opportunity cost concept is founded on the deprival of another opportunity and the benefit associated with it is called deprival value."¹⁰

There may be many factors for valuation of brand. To mention a few it may be Leadership, Stability of Market, Global coverage, Protection and Support etc. When P-E ratio and other interbrands examination of multiples is examined and plotted on a graph it shows a positive correlation between brand strength and brand multiple. Graph represents a classic S-shaped curve as shown below. "Early in its life-cycle, the increase in the brand value is gradual. But as the brand establishes itself, there is an almost exponential increase in the brand value. This rate of increase declines in the later stages although the market share of the brand still grows."¹¹ This method is based on weighted average net profit attributable to brand with other factors so it is widely accepted though there is no proof of its validity.

CAPITALISATION OF INTERNALLY DEVELOPED BRANDS

As far as cost of acquired brand is concerned all agree that it should be shown as an asset but there are deferring views regarding internally developed brand which can be summarised as under.

1. Arguments against showing brand value as an asset-

- (1) **It will defeat very purpose of Accountancy** : Accountants are supposed to provide information to outsiders so that they can make valuation of the business rather than make valuation. In this regard London Business School (LBS) observed that a dangerous circularity may arise when accounts try to measure the economic value of the business rather than provide information for outsiders to do so.¹²
- (2) **It will not be verifiable** : if internally-developed brand is shown as asset it will not be verifiable by the auditors which would pose severe problems for them because auditors can audit process and transactions and not the value.
- (3) **External parties are not so interested in the value of brand** : External parties are more interested in the traditional measures such as cash flow, sales and profits to make their assessment regarding value of company. Brand value is important specially with regard to mergers and acquisitions which seldom take place during the life time of the company.
- (4) **Study in US and Canada suggested not to use it** : In a study of 68 CFOs of large North American Corporations Collins found contrary to expectations that CFOs were opposed to brand valuation in almost every instance and in almost any form-even for the purpose of internal use.¹³ To find out importance of brand Advertising Research Foundation (ARF) established Brand Equity Committee (BEC) and it was also found that the concept of brand equity is difficult to define and measure so it should be avoided.

2. Arguments in favour of showing brand value as an asset-

- (1) **It should be capitalised even on accrual concept** : As benefits of marketing expenditures are not occurring in the same period in which it is incurred, it should be shown as an asset and should be spent in the period in which benefits are occurred.
- (2) **It should be capitalised on materiality concept** : As huge expenditure is incurred on marketing which is quite material so it should be capitalised.
Regarding disclosure of all material information it should be noted that demand for more relevant information is continuously increasing and if brand value is also disclosed it will provide more information.
- (3) **Bottom-line presentation** : As management and other interested parties are more concern with the bottom-line i.e. profit in the financial statement, expenses on development of brand should be capitalised otherwise it will directly decrease the net profit.

- (4) **To show correct ROI** : Return on investment is computed by a ratio where return is shown in numerator and investment is shown in denominator. If expenditure on development of brand (say x) is shown as expense it will decrease numerator while it should increased denominator which will distort the sean. This can be understood as follows -

$$\text{ROI (When expenditure is expensed)} = \frac{\text{Return}}{\text{Investment}} \times 100$$

$$\text{Modified ROI (Treating expenditure as asset)} = \frac{\text{Return} - x}{\text{Investment} + x} \times 100$$

- (5) **To support long term interest** : If all expenses are expensed in the same year, there will be a shift from long-term emphasis to short-term emphasis as it will motivate management to curtail marketing expenses to show better results which is not good for the life of business.
- (6) **There is no uncertainty regarding worth of brand** : No doubt valuation of brand is difficult due to uncertainty which affect the valuation but it is not enough to remove it from the definition of assets. The uncertainty affects the valuation, but it changes the nature of the item only if the uncertainty is so great that the expected future benefit is zero or negative. Brand should be valued as there is no doubt about its future benefits.
- (7) **It is based on sound footing** : It can be argued that when one concern incurred some amount in one year (Acquisition of brand) to increase profitability and another concern incurred it over a period (Internally-developed brand) for the same object then how it can be treated separately in the accountancy.
- (8) **It is a real asset** : Companies are legally entitled to use internally developed brand in their sole ownership which can be sold like any other asset so it should be treated as an asset.

CONCLUSION

In conclusion, it can be said there are different views on the subject. Position in Australia and UK is different from US which probably exist due to other developments such as conceptual framework, Accounting Standards (AS) and government backing. As long as balance sheet continues to be presented on historical cost basis, managers and investors should be satisfied with the supplementary informations regarding brand value which can be shown below the financial statements.

The concept of showing internally developed brand as an asset is getting good support in Australia where Modified Historical Cost Accounting System is used in which other tangible assets are also revalued. Ernst & Young conducted a survey in Australia and found that 30 out of Australia s top 150 companies were now including some amount for brand values.

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CAPITAL RECOVERY ABILITY IN SELECTED ROAD TRANSPORT UNDERTAKINGS

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ABSTRACT

Capital Recovery Index (CRI) shows a three-dimensional dialect of operating cash in road transport industry. In the preliminary stage, if the VCRI (Variable Cost Recovery Index) is unity, revenue generated is just sufficient to recover the cost. If it is less than unity, revenue is insufficient to meet variable cost. If the index is greater than unity, it implies that cash is available to meet that second priority, fixed cost. In the intermediate stage, if the FCRI (Fixed Cost Recovery Index) is unity, the transport corporation is unable to recover the full fixed cost in various degrees. If the index is greater than unity, a cushion is provided for recovery of depreciation as cash in the final stage. The paper shows CRI of selected Road Transport Undertakings.

S.S.Murthy has developed CRI which shows a three-dimensional dialects of operating cash in road transport industry. In the preliminary stage, if the VCRI (Variable Cost Recovery Index) is unity, revenue generated is just sufficient to recover the cost. If it is less than unity, revenue is insufficient to meet variable. A ratio between cash available for depreciation recovery and actual depreciation charged by the transport corporation is termed as CRI (Capital Recovery Index). The CRI emphasises operating cash and its adequacy to recoup cost at each of the three stages. It brings to surface the revenue and capital losses separately in its various stages. This will enable the management to identify the class of cost or the stage that requires a corrective measure. CRI is a more useful and informative parameter to make inter-firm and intra-firm comparisons. It stresses the ability of SRTC to generate cash and recoupment of investment. Five major Road Transport Corporation in the country have been chosen for the study : (i) Andhra Pradesh State Road Transport Corporation (ii) Karnataka State Road Transport Corporation (iii) Rajasthan State Road Transport Corporation (iv) Pepsu State Road Transport Corporation (v) Delhi Transport Corporation. The Period of study is five years from financial year 1995-96 to financial year 1999-2000. The study aims to analyse cash generation and capital recoupment ability of selected undertakings. A composite index is used for inter-firm and intra-firm comparison.

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Cash generation is must to meet operational expenses, assets replacement, debt servicing and bridging the gap between available working capital and its requirements. In this model traffic revenue realised from the sale of tickets is the main source of operating cash revenue. Non-operating revenue has to be excluded because it does not add to the liquidity of the SRTC. Depreciation has been excluded because it is a non-cash cost, because there is no cash out-go for this cost. For the recovery of cost top priority is attached to variable costs, which are avoidable and value related. If the Variable Cost Recovery Index (VCRI) in unity, revenue generated is just sufficient to recover the cost. If it is less than unity, revenue earned is insufficient to meet variable cost. Further, if the index is greater than unity, it implies that cash is available to meet the second priority, i.e. fixed cost. In the intermediate stage we compete contribution available against fixed cost after meeting the variable cost. If the Fixed Cost Recovery Index (FCRI) is unity, the SRTC just recovers the fixed cost and cannot absorb more cost. If the index is lesser than unity, then the SRTC is unable to recover the full fixed cost. If the index is greater than unity, a cushion is available for recovery of depreciation in the final stage available cash is competed against recoupment of depreciation.

Variable Cost Recovery Index (VCRI) :

$$\text{VCRI} = \frac{\text{Traffic Revenue}}{\text{Variable Cost}}$$

Fixed Cost Recovery Index (FCRI) :

$$\text{FCRI} = \frac{\text{Contribution}}{\text{Fixed Cost}}$$

Capital Recovery Index (CRI):

$$\text{CRI} = \frac{\text{Cash Availability for Depreciation}}{\text{Depreciation}}$$

The following are the main results -

- (I) It is significant to note that the VCRI and FCRI indices are greater than unity in all the years except 1998-99 in case of APSRTC. VCRI was greater than unity (with an average of 2.96) at the preliminary stage implying that APSRTC generated sufficient internal

cash to meet the fixed cost. FCRI was also greater than unity (with an average 1.05) at intermediate stage signifying that the APSRTC generated internal cash to cover the fixed cost and to provide a cushion to recover actual depreciation as cash in the final state. CRI is 0.96 in 1995-96 and has decreased continuously to 0.04 in 1999-2000. In 1998-99 the FCRI was less than unity hence CRI could not be computed.

- (II) In KnSRTC, the VCRI is greater than unity (with an average 2.47) through out the study period. At the preliminary stage implying that the KnSRTC generated sufficient internal cash to meet the fixed cost. FCRI was less than unity in the first two years of the study. Therefore, the corporation was unable to recover the fixed cost in full. During the period between 1997-98 to 1999-2000 FCRI was greater than unity therefore, KnSRTC was able to generate internal cash to cover fixed cost and to provide a cushion to recover actual depreciation as cash. CRI was 0.37 in 1997-98 and later on it decreased to 0.02 in 1998-99 and finally gone up to 0.06 in 1999-2000. Since FCRI was less than unity in 1995-96 and 1996-97, the CRI could not be computed.
- (III) RSRTC's VCRI was greater than the unity (with an average of 2.91) all through the study period. At the preliminary stage implying that the RSRTC generated enough internal cash to meet fixed cost. FCRI was greater than unity in the first three years of the study period. Therefore, the corporation was able to meet its fixed cost fully and to provide a cushion to recover actual depreciation as cash in those years. FCRI was less than unity in 1998-99 and 1999-2000, implying that the corporation was unable to recover its fixed cost in full. Decrease in FCRI is an indicator of rising costs and diminishing contributions. CRI was 0.98 in 1995-96 and it decreased to 0.78 in 1997-98. In 1998-99 and 1999-2000 FCRI was less than unity, therefore, CRI could not be computed.
- (IV) In case of PRTC, the VCRI was greater than unity (with an average of 3.06) through out the study period. At the preliminary stage implying that the corporation has generated sufficient internal cash to meet fixed cost. FCRI was less than unity with decreasing trend through out the period. Therefore, the corporation was unable to recover the fixed cost in full and no cash available for depreciation. For this reason CRI could not be computed.
- (V) The VCRI was greater than unity (with an average of 3.02) through out the study period. At the preliminary stage implying that DTC has generated enough cash to meet the fixed cost. FCRI was less than unity through out the study period. Therefore, corporation was unable to recover the fixed cost in full and no cash available for depreciation during the study period. For the same reason, being FCRI 1, the CRI could not be computed.

On the basis of the results of the Capital Recovery Index it can be assumed that the working of the SRTCs has been far below the expectations. In the selected SRTCs PRTC and DTC could not even generate cash for depreciation through out the study period. The other three SRTCs viz. APSRTC, KnSRTC and RSRTC, also showing declining trend in CRI.

APPENDIX
CAPITAL RECOVERY INDEX OF SELECTED SRTCS

Years	VCRI	Contribution	Fixed Cost	FCRI	Cash availability for Depreciation	Depreciation	CRI
APSRTC							
1995-96	3.16	104790.00	90386.00	1.16	14404.00	15030.00	0.96
1996-97	3.02	110969.00	104153.00	1.07	6816.00	13835.00	0.49
1997-98	2.84	121275.43	119646.99	1.01	1628.44	13546.80	0.12
1998-99	2.94	130990.00	131840.00	0.99	-850.00	15757.00	-
1999-00	2.84	145571.31	144907.99	1.00	663.32	16359.30	0.04
Average	2.96			1.046			0.322
KnSRTC							
1995-96	2.46	45668.03	51964.61	0.88	-6296.58	6011.80	-
1996-97	2.34	47343.28	57376.44	0.83	-10033.16	7169.06	-
1997-98	2.59	62445.11	59665.64	1.05	2779.47	7566.13	0.37
1998-99	2.56	36044.00	35945.00	1.00	99.00	5951.00	0.02
1999-00	2.40	40483.01	40053.27	1.01	429.74	7192.38	0.06
Average	2.47			0.95			0.09
RSRTC							
1995-96	3.19	28102.97	25071.70	1.12	3031.27	3096.90	0.98
1996-97	2.99	28850.62	25622.38	1.13	3228.24	3316.47	0.97
1997-98	2.77	30950.93	27941.29	1.11	3009.64	3873.97	0.78
1998-99	2.96	33117.13	35678.74	0.93	-2561.61	4116.59	-
1999-00	2.62	30687.88	37920.17	0.81	-7232.29	3348.64	-
Average	2.91			1.02			0.55
PRTC							
1995-96	3.06	6334.69	7234.01	0.88	-899.32	567.97	-
1996-97	3.04	6472.26	7884.55	0.82	-1412.29	567.37	-
1997-98	2.97	6779.41	9823.26	0.69	-3043.85	518.35	-
1998-99	2.95	7641.97	10351.69	0.74	-2709.72	513.73	-
1999-00	3.27	8452.46	11727.68	0.72	-3275.22	327.36	-
Average	3.06			0.77			-
DTC							
1995-96	2.57	9098.70	47255.06	0.19	-38156.36	1555.16	-
1996-97	2.23	8856.25	36407.94	0.24	-27551.69	1351.75	-
1997-98	2.91	16720.21	34114.21	0.49	-17394.00	1363.08	-
1998-99	4.38	30067.76	51422.18	0.58	-21354.42	1579.60	-
1999-00	3.01	20454.70	35741.91	0.57	-15287.21	1866.32	-
Average	3.02			0.41			-

Source : Profile & Performance of relevant years, CIRT, Pune



CORPORATE GOVERNANCE

The role of Accounting Professionals

*Dr. G. L. Dave

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ABSTRACT

In this paper first of all the emergence of concept of corporate governance in India and other countries of world was discussed. Then it explains the formation of nomination Committee, remuneration Committee and Audit Committee and their role in Corporate Governance. Second part of the paper discusses the role of accounting professionals in good corporate governance.

The first committee on Corporate Governance was setup in U.K. in 1991 under the chairmanship of Sir Adrian Cadbury. The committee had submitted 19 point report and a code of Best practice in December 1992. The Cadbury Report in the U.K. was followed by the Greenbury Report, U.K. (July 1995), Hampel Report U.K. Dec. 1997. In U.S., Corporate Governance code was given by Jenkins Report in 1994. It was commissioned by AICPA. In Canada, Toronto Stock Exchange Report was given in December 1994. In Australia, Australian Investment Management Association gave its report in June 1995. EASDAQ Rules, Europe was given in September 1996. Vienot Report in France July 1995, Peter Report in Netherlands (October 1996) and King's Report in South Africa (November 1994) were given in corporate Governance. The organisation for Economic co-operation and Development (OECD) had resolved to spearhead the efforts to prepare a set of internationally applicable Principles of corporate governance, based on the experience in member Countries with inputs from international organisation, such as World Bank. The guidelines were finalised and adopted during the annual meeting of the OECD in Paris on May 26, 1999.

INDIAN SCENE

In India a task force was setup by the confederation of Indian Industry (C I I) with Shri Rahul Bajaj as Chairman. The committee released its code of corporate Governance in

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April 1998. The Kumarmanglam Birla Committee on corporate Governance mandated by the SEBI has also given recommendation on corporate Governance. Public Sector Financial Institutions Guidelines for nominee Directors- The Public Sector Financial Institutions in India have set up 19 guidelines for the persons nominated as directors on corporate Boards. All these Committees and Boards have recommended a Code for Corporate Governance on the three pillars of wisdom:

1. Nomination Committee
2. Remuneration Committee
3. Audit Committee

1. **NOMINATION COMMITTEE**

The role of non-executive directors, board of directors and institutional directors is explained below -

(A) Non-Executive Directors

All these Committees whether Hampel, Cadbury and Greenbury Committee in U.K. and Kumarmanglam Birla Committee (India) has recommended Nomination Committee, Kumarmanglam Birla Committee has recommended a Board with at least fifty percent independent directors, if the Chairman is an executive director and alternatively a Board with at least one third independent directors if the Chairman is non executive director the Committee did not favour representation of financial institutions in the board.

For constituting a balanced Board, its is important to constitute a Nomination Committee comprising of three to five outstanding personalities in the field of economics, accounting, law, Management. The nomination committee should advise shareholders in the matter of nomination of independent directors. These independent directors or non-executive director should be professionally competent so that they may exercise check over, the executive directors and benefit the company by their knowledge and experience.

(B) Board of Directors

The Board of Directors plays an important role in good Corporate Governance. The companies Act 1956 has given provisions for functioning of BODs. Recently the working group set up by Government of India to redraft the old provisions. The Group has recommended a statement of Director s Responsibility (SDR) to be attached to the Annual Accounts for better transparency. Besides the SDR, the working Group has also emphasised on financial disclosures. The Board must be sure that the company has adequate information, Control and audit systems in place to guide the top management whether the company is meeting its business and objectives.

(C) Institutional Directors

In Corporate Board, the role of nominee directors of financial institutions (FI) is very important. Since financial Institutions hold a major chunk of shares in companies, their role is very important to improve the accountability. Though the FIs have prescribed 19 point agenda for nominees in companies, like depreciation charging methods should be examined, Investment in unlisted companies to be carefully examined etc. In addition to these 19 points agenda nominee directors are to play an effective role in areas such as investment in subsidies and loans, awards of contracts, merger and acquisitions, expansion and diversification, dividend and accounting policies. Above all the nominee director should act in a cohesive manner with other directors on the broad.

2. REMUNERATION COMMITTEE

Managerial Remuneration is an important factor in private corporate world, for this The Cadbury Committee has said that Shareholders require that the remuneration of Directors should be both fair and competitive. Hampel Committee has observed that Level of remuneration should be sufficient to attract and retain the directors needed to run the company successfully. The component parts of remuneration should be structured so as to link rewards to corporate and individual performance. The Greenbury Committee has also recommended that the Board of Directors should setup a remuneration Committee consisting of Non-executive directors. Kumarmanglam Birla Committee has said, to avoid conflicts of interest the remuneration Committee, which would determine the remuneration package of the executive directors should comprise minimum of three non-executive director, the Chairman of the Committee being an independent director.

3. AUDIT COMMITTEE

Indian Corporate Governance code has recommended establishment of independent and qualified audit committee. The Blue Ribbon Committee in the U.S. has recommended that audit committee should have comprise of a minimum of three directors, each of whom is financially literate. The Blue Ribbon Committee has said that members of the audit Committee shall be considered important if they have no relationship to the corporation that may interfere with the exercise of their independence from management and corporation. The Blue Ribbon Committee has also suggested certain other measures for improving efficacy of audit. They are as under:

- a) To have a written charter of activities approved by a full Board specifying responsibilities of the audit Committee
- b) The activities of the audit committee should be discharged to the public assembly
- c) Audit Committee should have the authority to propose appointment and replacement of the outside auditors.

- d) The Audit Committee should enjoy the full authority of carrying out discussions with the auditors and the board should ensure complete independence of the outside auditors.

The Kumarmanglam Birla Committee has recommended that the audit committee should have minimum three non-executive directors, majority being independent with at least one director, having financial and accounting knowledge and the chairman of the Committee should be an independent director.

The Companies Bill 1999 has inserted certain provisions in Companies Act 1956 regarding audit committee. It has mentioned that every public Company having a paid up capital of not less than five crores of rupees shall constitute a Committee of the Board to be formed as Audit Committee. It shall consist of not less three directors and such number of other directors as the board may determine of which two thirds of the total number of members shall be director, other than managing or whole time director.

- (i) The members of Audit Committee shall elect a Chairman from amongst themselves.
- (ii) The annual report of the company shall disclose imposition of the Audit Committee.
- (iii) The Auditor the internal auditor and the director in charge finance shall attend the meeting of audit committee but they will not be having any voting right.
- (iv) The audit Committee should have discussion with the auditors periodically about the internal control system, scope of audit including observation of the auditors, and review of the half-yearly and annual financial statements before submission to the board.
- (v) The Audit Committee will see that internal control system is fully implemented.
- (vi) The Chairman of the Audit Committee shall attend the annual General Meetings for providing clarification on matter relating to audit.

The main functions of the Audit Committee are:

- (a) To consider appointment, dismissal and resignation of external auditors.
- (b) To discuss with the external auditors the nature and scope of his audit and to ensure coordination between auditors where more than one audit firms are involved in the audit of the company.
- (c) To prereview half-yearly and annual financial statements and the auditor's report before submission to the Board.
- (d) To ensure compliance with stock exchanges as well as legal requirements.
- (e) To review internal control system.
- (f) To review internal audit programme and to ensure coordination between internal and external audit.
- (g) To consider the major findings of internal investigation and management response.

- (h) To keep watch on the working of both external and internal auditors and to discuss their problems and reservations.

Though the concept of Audit Committee is new to India. It will act like a watchdog. Its role is to ensure that the auditors of a company perform their duties satisfactorily and to the best interest of stakeholders. The presence of Audit Committee will improve the Quality of Corporate Governance.

THE ROLE OF ACCOUNTING PROFESSIONALS

The role of the accountant has been the subject of constant review and reassessment in the changing corporate world. The accountant in whatever capacity he may be either as financial controller, internal auditor or statutory auditor, director finance, or non-executive director has a special role and responsibilities in corporate governance. With computers having largely taken over the book-keeping functions in a company the role of the accountant in today's environment is such that he has to be a businessman first and accountant second, accordingly his role has increased in effective implementation of corporate Governance Code.

The Auditors will verify the composition of Board of Director and will see that sufficient number of Executive Director who are independent are in the Board. The auditor will see that there is maintenance and provide review of internal control system. Auditors should scrutinise the minutes of Audit Committee meeting to review if it has discharged the functions assigned to it. An Auditor may also help the audit Committee to prepare its annual chapter with the advent of the Audit Committee framework common to all Corporate Governance schemes and requirements, internal audit can have a much needed visibility as well as adequate scope to interact directly with the Committee and draw its attention to relevant issue with greater coordination under the aegis of Committee, statutory and internal auditors can work in unison toward desired corporate reporting objectives.

With regards to remuneration Committee Chartered Accountant will scrutinise board resolutions to verify fixation of the remuneration of non-executive Directors. It will also scrutinise board's resolution recommending the remuneration of executive directors and confirmation resolution in Annual General Meetings. He will also do the analysis of executive compensation in the light of the upper limit given in schedule XIII of the Companies Act 1956. If the Board decides on linking pay performance relationship he will also review it. It is the duty of the auditor to scrutinise remuneration fixation procedure. To ensure that Board is following the correct procedure he will verify at least four meeting of the board was held and the maximum time gap between two meetings did not exceed four months. The auditors will check if any director is a member of more than ten Committees across the companies and the chairman of more than five Committees across the companies. The auditor will verify if the fifteen items covered in Annexure-I of the SEBI code are addressed by the Board and necessary information was placed before the Board.

In connection with Management Discussion and Analysis, the auditor will evaluate the informations. He will also evaluate the functioning of the shareholder s, Grievance Committee. Auditor will also check pending shareholder s, complaints as regards non-receipts of dividend, delayed share transfer etc. He will see the timelines of the information and finally check that all significant statements are made public. Though the Reporting Format for compliance certificate has not yet been standardised but the auditor will look into the depth of verification relating to various issues covered under the code.

The responsibilities of Board has increased with the improved corporate governance, Since finance Executive is in a good position in the organisation, he can make a very valuable contribution. Financial executive can perform his twin functions of supporting organisational strategies and process and ensuring transparency of transaction and adherence to accepted norms.

There is no doubt that the role of accounting professionals has increased in corporate world to strictly adherence to the norms of corporate governance at every stage whether at Nomination Committee, remuneration Committee, audit committee and Board procedure of the company. At the same time the role of professional Institute like Institute of Chartered Accountants of India has also increased. The ICAI can consider recognising and rewarding auditors who have highlighted deficiency of the companies in corporate governance. The Institute should include this subject in their examination and text for students. The Institute can constantly have a dialogue with the government in improving the Quality of reporting and follow up action taken in respect of audit Qualifications. At the same time Universities should also include this subject for their examinations and text for students at postgraduate levels. An important part of the corporate governance platform is integrity and timelines in financial reporting whether these are to be certified or reported upon, auditor can play a key role in ensuring transparency and insisting upon absolute adherence to accepted norms and practices. Also, they can within the framework, suggest improvements in presentation and clarity so that the intended message is conveyed without any ambiguity.

Professional accountant can help in good corporate governance. The professional accountant will see that in an organisation Internal Control Systems is properly set or not that will ensure efficient conduct or business. The Internal auditor will look upon Budgetary control system is sound it will ensure accountability and transparency. The professional account can monitor the financial planning and Management. The resultant effect will be a financial discipline in the organisation. The Internal Auditor will also see whether various rules and regulations are complied with or not. That will protect the good will of the firm. The another point in good governance is that the Accountant should see whether proper tax planning has been done or not. He will also ensure that proper management information system is working or not that will establish proper communication. The accountant will also monitor the cost control. If above mentioned aspects are looked up by the professional accountant that will Generate more shareholders return and it will reflect good corporate Governance.

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EVA AS PERFORMANCE INDICATOR

A Case Study of Infosys

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ABSTRACT

The concept of EVA is better than the concept of accounting profit as a tool a value creation because it considers the overall cost of capital. In this paper an attempt has been made to analyse the financial performance of Infosys Technologies Ltd. on the basis of traditional parameters like ROCE, ROE, EPS etc. and the new performance measure EVA.

Economic Value Added (EVA) measures the profitability of a company after taking into account the cost of all capital employed including the equity. It is the post tax returns on capital employed minus the cost of capital employed in the business. It represents the value added to the shareholders by generating operating income in excess of the cost of capital employed in the business. As observed by management Guru Peter Drucker, 'EVA is based on something we have known for a long time : what we call profits, the money left to service equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind it pays taxes as if it had a genuine profit. The enterprise returns less to the economy than it devours in resources..... until then it does not create wealth, it destroys it.'

OBJECTIVES OF THE STUDY

This study has the following broad objectives :

- To examine whether the Infosys Technologies Ltd (ITL) has been able to generate value for its shareholders.
- To compare the performance of the company applying traditional parameters such as ROCE, EPS and ROE with that of EVA.
- To findout the relationship between ROCE and EVA as a Percentage of Average Capital Employed (EVACE)

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METHODOLOGY

The financial data of the ITL, selected for this study has been collected from the published annual reports for the period 1996-97 to 2000-01. The financial performance of the company has been analysed by making a use of some traditional parameters such as ROCE EPS and ROE. The statistical technique of regression has been used to estimate the values of EVACE taking ROCE as an independent variable and thereafter, chi-square test of goodness of fit have also been applied to test whether there is a significant difference between observed and estimated values of EVACE.

CASE STUDY OF INFOSYS TECHNOLOGIES LTD. (ITL)

Table 1 depicts the EVA statement of ITL for four years from 1997-98 to 2000-2001. It can be seen from the table that the absolute figures of EVA continuously marked an increasing trend during the period of study. The EVACE, also, registered an upward trend except in 1999-2000 when it decreased to 18.34 % as against 28.84% in 1998-99 but in the last year of the study it recovered sharply and reached to 35% being the highest during the period of study.

Table - 1
ECONOMIC VALUE-ADDED STATEMENT

Year ended March 31	2001	2000	1999	1998
1. Average capital employed (Rs. in crore)	1,111.47	703.87	245.42	142.90
2. Beta variant	1.54	1.48	1.48	1.48
3. Risk-free debt cost (%)	10.30	10.45	12.00	12.15
4. Market premium	7.00	8.00	9.00	10.00
5. Cost of equity (%)	21.08	22.29	25.32	26.95
6. Weighted average cost of capital (WACC) (%)	21.08	22.29	25.32	26.95
7. PAT as a percentage of average capital employed (%)	56.08	40.63	54.16	42.24
8. Economic value-added (EVA)			(in Rs. Crore)	
Operating profit	696.03	325.65	155.86	65.86
Less : tax	72.71	39.70	22.94	5.50
Less : cost of capital	234.30	156.89	62.14	38.51
Economic value-added	389.02	129.06	70.78	21.85
9. EVA as a percentage of average capital employed (%)	35.00	18.34	28.84	15.29

* The cost of equity is calculated by using the following formula :

$$\text{Risk free debt cost} + (\text{Market premium} \times \text{Beta variant}).$$

Source : Annual Report and Accounts of Infosys Technologies Ltd. from 1997-98 to 2000-01.

REGRESSION ANALYSIS AND CHI-SQUARE TEST

It has also been analysed whether Return on Capital employed and EVACE have any relationship between them. For this purpose statistical techniques of correlation and regression have been used. The Karl Pearson's coefficient of correlation between ROCE and EVACE came to 0.75 which indicates that both ROCE and EVACE have a high degree of positive correlation. The study of correlation have been further extended to establish a cause and effect relationship between the two variables by using the technique of regression analysis. The regression equation of EVACE (Y) on ROCE (X) comes to $Y = 0.9134 X - 19.72$. The estimated values of EVACE on the basis of above regression equation and the original values of the same and also the application of chi-square test are given below :

Table - 2

ORIGINAL AND ESTIMATED VALUES OF EVACE AND CALCULATION OF CHI-SQUARE					
Year ended	Original	Estimated	(O-E)	(O-E) ²	(O-E) ²
March 31	values (O)	values (E)			E
1998	35.00	31.50	(+)3.50	12.2500	0.3889
1999	18.34	17.38	(+)0.96	0.9216	0.530
2000	28.84	29.74	(-) 0.90	0.8100	0.0272
2001	15.29	18.85	(-)3.56	12.6736	0.6723
Total	97.47	97.47	-	-	1.1414

Chi-square

Stating the problem symbolically

H_0 : There is no significant difference between observed and expected values of EVACE ← Null hypothesis

α : 0.05 ← Level of significance for testing hypothesis

It is clear from the above table that the original and estimated values of EVACE moved in a very narrow range. The difference between original and estimated values varied in a positive direction during the years 1997-98 and 1998-99 while the difference varied in negative direction during the years 1999-2000 and 2000-2001. The calculated value of chi-square (1.414) is less than the critical value of chi-square (7.815) at 5% level of significance for three degrees of freedom. Hence, the null hypothesis (H_0) is accepted which means the differences between Original and Estimated values are insignificant and they have arisen due to sample fluctuations only.

TRADITIONAL PERFORMANCE INDICATORS VERSUS EVA

The financial performance of ITL, a front line IT company of our country based on traditional parameters and EVA have been presented in table 3.

Table - 3
TRADITIONAL VERSUS EVA PERFORMANCE INDICATORS OF ITL

Year ending March 31	2001	2000	1999
ROCE (%)	62.62	46.27	63.51
ROE (%)	56.08	40.63	54.16
EPS (Rs.)	94.23	43.23	20.17
EPS Growth (%)	117.97	108.77	120.15
EVACE (%)	35.00	18.34	28.84

Source : Annual Report of Infosys Technologies Ltd. 1998-99 to 2000-2001.

As it appears from the table 3 that both ROCE and ROE marked a fluctuating trend during past three years under study. ROCE was 63.51% during the year 1998-99. It declined to 46.27% during the year 1999-2000 and thereafter it increased to 62.62% during the year 2000-2001. Similarly, ROE also showed a fluctuating trend during the past three years and reduced to 40.63% during the year 1999-2000 as compared 54.16% during the year 1998-99. But it shot up and reached to 56.08%, the highest, during the year 2000-2001. EPS on the other hand, registered an upward trend during this period. It was as high as Rs. 94.23 during the year 2000-2001 and as low as Rs. 20.71 during the year 1998-99.

It can be further seen from the table that EPS has shown more than 100 percent growth in all three years of the study. As rightly observed by Ravi M. Kishore 'Growth in EPS is more relevant for pricing of shares from absolute EPS. A steady growth in EPS year after year indicates a good track of profitability'. An analysis of financial performance of the company revealed an impressive performance throughout the period under study except 1998-99. This was due to some unprecedented turbulence in the technology sector in the US which in turn has contributed a slowdown in overall economy.

CONCLUSIONS

- The company has been successfully able to create value for its shareholders. The company's earnings are much higher than the overall cost of capital.
- The traditional performance indicators are showing quite high values of ROCE, ROE and EPS growth as compared to EVACE. It is observed that the traditional parameters indicate quite a rosy and healthy picture of the company during all three years of the study.

It is, therefore, suggested that the companies must compute and publish EVA statistics also in their annual reports. The concept of EVA emphasises on quality of earnings and not just the quantity as it takes into account the overall cost of capital employed in the business including the cost of equity.

- It is further concluded that both ROCE and EVACE are positively correlated.

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HARMONIZATION OF INDIAN ACCOUNTING STANDARDS WITH INTERNATIONAL STANDARDS

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ABSTRACT

Accounting standards are being formulated not only at the national level but also at the international level. 150 professional accounting bodies from 110 countries are now members of IASC (now known as IASB). So far, it has formulated 41 International Accounting Standards (IASs). Such standards have been adopted as the national standards by some of the developing countries while in other's, it provides the benchmark for the formulation of national accounting requirements. Besides, IASs have also received a good support from the IOSCO (International Organization for Securities Commission) which recognized 30 IASs as core standards for preparation of financial statements for cross-border listing of securities. The Institute of Chartered Accountants of India have issued 27 accounting standards upto the end of February 2002. The paper aims to examine the issue of harmonization of Indian accounting standards with international accounting standards.

The International Accounting Standards Committee have issued 41 accounting standards Out of which 30 have been identified as core standards for cross-border listing. The objective of issuing standards by the IASC is to ensure harmonization of accounting standards across countries and comparability of accounting information disclosed by corporate enterprises the world over. The ICAI's activities concerning standard setting have been greatly influenced by the IASC and standards issued by the ICAI are predominantly based on the international accounting standards. So, to what extent accounting standards issued in India promote the objectives of harmonization is an important issue for examination. In other words, we would like to examine whether the standards issued by the ICAI are compatible with the corresponding standards issued by the IASC. Compatibility of accounting standards will ensure comparability of accounting information disclosed by corporate enterprises in different countries. For this purpose, the first three Indian Accounting Standards are selected with corresponding international Standards

1.	Disclosure of Accounting Policies	IAS-1	AS-1
2.	Valuation of Inventories	IAS-2	AS-2
3.	Cash Flow Statement	IAS-7	AS-3 (revised)

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To avoid bias in the selection of accounting standards for our study, we have selected the first three Indian Standards only.

The main purpose of AS-1 issued by ASB on 'Disclosure of Accounting Policies' is to promote better understanding of financial statements and also to enhance meaningful comparability of financial statements of different enterprises. AS-2 deals with the principles of valuation of inventories for financial statements. This standard is applicable to both of Profit & Loss A/C as well as Balance Sheet. Issued in June, 1981, it was made mandatory w.e.f. 1.4.99. Valuation of inventories is essential for deriving the cost of sales and hence the profit or loss of a firm. AS-3, the initial standard on Fund Flow Statement, was revised in favour of Cash Flow Statement in March, 1997. It is predominantly based on IAS 7 on Cash Flow Statement. AS-3 has been made mandatory for accounting periods commencing on or after 1.4.2001. In India, a Cash Flow Statement does not form part of financial statements to be prepared in compliance with the Companies Act, 1956.

Table 1 makes a comparison between IAS-1 and AS-1. This is followed by comparison of IAS-2 and AS-2 in table 2. Table 3 compares Indian Cash Flow Statement Standard (AS-3) with that of IAS-7.

Table - 1
COMPARISON BETWEEN IAS-1 & AS-1

No.	Item	IAS-1	AS-1
1.	Selection of Accounting policies	Selection of accounting policy should be in compliance with all applicable International Accounting Standards.	Primary consideration in the selection of accounting policy is guided by the concept of 'truth & fairness'
2.	Guiding principles	<ul style="list-style-type: none"> - Relevance for decision making by the users - Reliability - Faithful presentation of results & financial position - Economic substance over legal form - Neutrality - Prudence - Completeness 	<ul style="list-style-type: none"> - Prudence - Substance over form - Materiality
3.	Fundamental accounting assumptions	<ul style="list-style-type: none"> - Going Concern - Consistency - Accrual 	<ul style="list-style-type: none"> - Going concern - Consistency - Accrual
4.	Disclosure requirements	<ul style="list-style-type: none"> a. All significant accounting policies should be disclosed in one place & should form a part of the financial statements. b. Change in accounting policy which have significant effect for the current period or in the later period should be disclosed. c. If the fundamental accounting assumptions are not followed in the preparation and presentation of financial statements, the fact should be disclosed. 	<p>Same as IAS</p> <p>Same as IAS</p> <p>Same as IAS</p>

There is no significant difference between IAS-1 and AS-1 except in the matter of guiding principles (Table 1). The Indian standard lays down only three principles viz. Prudence, Substance over form and Materiality. But IAS-1 is more comprehensive in that it lays down six important principles viz. Relevance for decision making, Reliability, Faithful presentation, Economic substance over legal form, Neutrality and Completeness. Thus, as a result of compliance with a set of more comprehensive guiding principles in case of IAS-1, the quality of accounting information is likely to be better than the information that can be produced using the Indian Standard.

Table - 2
COMPARISON BETWEEN IAS-2 & AS-2

Sl. Item No.	IAS-2	AS-2
1 Applicability	It is applicable to work in progress of service providers	It is not applicable to work in progress arising in the ordinary course of business for service providers
2. Special treatment of spares	No special treatment of spares used in fixed assets	Spares used in fixed asset are excluded from the definition of inventories and are accounted for as per AS-10
3. Classification of inventories	<ul style="list-style-type: none"> - Raw Materials & Components - Work in progress - Finished goods - Stores & spares. 	Same as IAS
4. Basic Measurement Principle	Lower of cost and net realisable value	Same as IAS
5. Measurement of cost	<ul style="list-style-type: none"> - Cost of purchase - Cost of conversion - Other costs incurred in bringing the inventories to their present position & location. 	Same as IAS
6. Foreign exchange difference	Inclusion of exchange fluctuation difference only in restricted situations.	Exclusion of foreign exchange difference (loss) in the cost of purchase
7. Cost of conversion	Fixed overheads are allocated to cost of conversion on the basis of normal capacity of production facilities.	Same as IAS

8. Allocation of cost of joint-products or by-products	Allocation on a rational basis and sale value used as the basis	Allocation should be made on a rational basis. No specific technique for allocation.
9. Inclusion of borrowing cost in cost of inventories.	Included in limited circumstances	Not included
10. Costs to be excluded from cost of inventories.	<ul style="list-style-type: none"> - Cost of abnormal loss - Strong cost - Administrative costs - Selling cost. 	Same as IAS
11. Techniques of cost measurement	<ul style="list-style-type: none"> - Standard Cost Method - Retail Method - Specific Identification Method 	Specific Identification method
12. Cost formulae	LIFO can be used as an allowed alternative vide Para 23 of IAS-2	<ul style="list-style-type: none"> - FIFO - Weighted Average - Use of Lifo is not allowed
13. Reversal of write back	Reversal is allowed	Issue has not been considered
14. Disclosure	Requires a elaborate separate disclosure of the carrying amount of inventories at net realisable value	Does not require a elaborate separate disclosure of the carrying amount of inventories at net realisable value
15. Definition	Reference in Para 4(c) regarding rendering services in logical	There is an irrelevant reference to rendering services in Para 3(c) though the standard is not applicable to service providers

We also face a mixed reaction in case of IAS-2 and AS-2 (Table 2). Although there are similarities in respect of a large number of items between the two standards, there are differences on some key issues (vide items 2, 6, 8, 9, 11, 12, 13 and 14 of table 2). Such differences may ultimately lead to differences in accounting numbers that may be produced using IAS-2 and AS-2 separately. As for example, with regard to allocation of joint costs, IAS-2 lays down 'sales value method' whereas the Indian Standard does not specify any 'rational basis' but leaves it to the preparer of financial statements. In case of firms having a number of joint products and by-products with significant amount of Joint costs, there may be substantial variation in the cost of production of joint products when different methods are used. Such variation in cost of production or sales will have their consequential impact on profit or loss. Accordingly, operating results of two firms adopting different methods allocation of joint costs will vary. Similarly, the use of different cost formulae (item 12) by IAS-2 and AS-2 may lead to difference in operating results.

Table - 3
COMPARISON BETWEEN IAS-7 AND AS-3 (REVISED)

No.	Item	IAS-7	AS-3
1.	Method of preparation	Direct Method & Indirect Method	Same as IAS
2.	Interest paid and interest and dividends received for financial enterprise	Not spelt out but consistency should be followed.	Treated as cash flows arising from operating activities
3.	Interest paid for non-financial enterprise	Treated as cash flows from financing activities	Same as IAS
4	Dividends received	Treated as cash flows from investing activities	Same as IAS
5	Dividends paid	Cash flows either from financing activities or from operating activities	Treated cash flows from financing activities
6.	Consolidation of cash flows subsidiaries, associates and joint ventures.	Allowed and both of proportionate consolidation and equity method is allowed. But separate disclosure of cash flows under proportionate consolidation method is encouraged	Not mentioned
7	Reporting of cash flows by industry and geographic segment	Allowed	Not mentioned

Lastly, when we come to Cash Flow Statement and examine the principal requirements as per AS-3 and those as per IAS-7 (Table 3). We find, as usual, that there are many similarities (items 1, 3, 4, 5) and differences (items 2, 5, 7, etc.) between the two. Cash Flow Statement is an important financial statement and any possibility that results in a difference in cash flow figures reduces the unity of 'cash as the king of all assets' and hence assessment about the liquidity position of the firm. Dhar (1998) studied the difference in treatment of various items under SEBI guidelines, AS-3 and IAS-7, and examined diversity of reporting practices among 106 reporting enterprises for the year 1996-97. He found a 'great deal of diversity in the treatment of certain items' (pp. 47-50), viz., loans and advances, borrowings, amalgamations and sales of undertaking, cash flows from foreign currency transactions and quality of Cash Flow Statement. Such differences are likely to persist when there are differences in the treatment of some items between IAS-7 and AS-3.

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WASTE MANAGEMENT IN COTTON TEXTILE INDUSTRY OF RAJASTHAN

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ABSTRACT

The management of materials is essential since the cotton cost represents the largest single component (60% to 70%) of the total cost of yarn. Moreover the waste management becomes essential since waste ranges between 13 percent to 15 percent in cotton textiles mills of Rajasthan. The theory of Darwin is the best applicable in today's competitive market that is 'survival of the Fittest'. The survival becomes the biggest problem for the cotton textile industry in India in the present market. The paper tries to undertake empirical study of waste management in selected units of cotton textile industry of Rajasthan.

For the purpose of accounting and valuation, waste is classified into two groups i.e. collected waste and uncollected waste. The collected waste is further classified as useable and saleable. The useable waste is the waste that is used again in the same preparation (generally termed as mixing) or in the inferior mixing in the pre-determined proportion. The waste consists of lap ends, silver ends and rowing ends. The problem of valuation of this waste doesn't arise since it is mixed for reprocessing. The mills are very particular about the management of invisible waste and it checks the wastes from time to time whether the loss is within the tolerance limit or not. The tolerance limit is ± 1 percent from the norms but the waste between ± 0.5 percent from the norms is considered very satisfactory. The actual invisible loss beyond the tolerable limit of ± 1 percent is considered as significance.

The object of the study is to suggest the techniques for waste management in cotton textile industry without impairing the quality of the product. The study aims to know the efforts made by SQC department for waste management and to bring down the wastes equal to the industry standards to achieve the object of financial management. The various mills situated in Rajasthan were personally visited for the purpose of direct personal investigation. The study is based on the questionnaire containing questions regarding various techniques and tests applied, standard sample size to conduct the tests, norms for tolerance limit, corrective actions initiated for the deviations and role of SQC department for waste management. The secondary data were taken from the annual reports of the mills and from the publication of ATIRA.

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COTTON TESTS

The Effective Length, Mean Length, Short Fibre %, Trash Contents %, Dispersion % and Mc Value tests are essential for testing the quality of the cotton and reducing the waste. A sample from each lot of cotton is taken to conduct these tests to okay the quality of the cotton to be purchased by the mills situated in Rajasthan. The tests are conducted at the time of quotations received with samples from the various suppliers.

Trash content test is essential to be conducted to find the presence of amount of foreign impurities like leaves, motes, sand and dirt etc. in a particular lot of cotton. Almost all the mills conduct the test with the help of a 'Trash Testing Machine' to minimise the waste. A sample of 200 grams of cotton from each lot of cotton is taken after breaking the bale. The sample is placed in the machine for five times to segregate the foreign impurities. The dirt, sand, leaves and motes etc. collected in the 'Trash Tray' is called Trash Contents. The Trash Contents % may be calculated by applying the following formula:

$$\text{Trash Contents \%} = \frac{\text{Total weight of dirt, sand, leaves and motes etc.}}{\text{Cotton Sample Weight} \times 100}$$

Short Fibre Contents : The ratio 'mean length/effective length' is calculated to measure short fibre contents since there is no equipment to measure it directly.

Fineness and Maturity : The Micronaire value (Mc) test is conducted to judge the fineness of the cotton for the purpose of maintaining the quality. The (Mc) is proportional to the product of maturity ratio and weight per unit length. To control over the waste the best quality cotton and fibres are to be purchased. The purchasing department initiates the purchasing process for purchasing the best quality cotton considering the reports submitted by SQC department is this regard to minimise the waste and control over waste.

Table - I

LOT-WISE TRASH CONTENTS TEST, EFFECTIVE LENGTH TEST AND MEAN LENGTH TEST

Tests	Sample size	Tolerable upto	For	Lot 1	Lot 2	Instrument
Effective Length	2 patterns	3%	Length			BTRA Fibre
Mean Length	2 patterns	4%	Length			BTRA fibre
Short fibre %	2 patterns	6%	Length			Length tester
Trash Contents %	2 samples of 100 grams	12%	Trash			Trash Analyser
Mc Value	3 plugs	.3	Fineness			Micronaire
Dispersion %						

Effective Length: means length of main bulk of longer fibres eliminating short fibres.

Short Fibre %: The percentage of fibres less than 1/2 of effective length.

Trash Contents: A test is conducted to predicate the process waste in Blow Room.

Mc Value (Micronaire value): Proportional to maturity ratio x Weight per unit length

BLOW ROOM TESTING

In the Blow Room the machinery is mainly meant to open the bales, blend the cotton from various bales, clean the cotton impurities and present it in the form of a sheet made up of small tufts. The process waste can be managed by reducing tuff size, removing the trash particles and foreign impurities etc., which generally exist in the cotton bales. The blending of various qualities of cotton and viscose is done in Blow Room.

At this stage the stack mixing is done comprising the selected lots of cotton. The mixing is then fed to Blow room machinery where cleaning and blending take place in order to achieve the desired quality and cost of a particular mixing. The yarn is not always produced from 100 percent cotton since the cotton is costlier than Viscose and other Fibres. The cost of cotton ranges between Rs. 20 to Rs. 30 per kg. and fibre ranges between Rs. 8 to Rs. 10. The mixing is done to reduce the cost of the yarn produced. The well-cleaned and blended cotton is automatically put forward to 'Scutching Machine' where 'LAPS' are produced and wrapped just like 'Thans' or sheets. At this stage SQC department conducts 'LAPS' testing with respect to its weight and length and also ascertains the minimum yard to yard variation in weight in the following manner:

Table - II
COTTON LAP TESTING REPORT

Lot No.	Machine No.	Count No.	Sample size	Standard weight	Actual weight	Tolerance limit
1	1	24s	One lap	22	21	+300 grams to - 300 grams
2	2	40	Perday	14	20.2	Do

To keep the process waste within the tolerance limit the standards sets by SQC department are very strictly followed. The 'LAP' beyond the tolerance limit is strictly rejected. The rejected 'LAPS' are reprocessed whereas the other 'LAPS' are carried to the next process.

RING FRAME SECTION

The department is the heart of a mill since the desired yarn is spun in this section. The roving is fed to ring frame for conversion into yam. The simplex bobbins full of the above desired twisted yam are carried to ring machine and kept on creels. Here the yarn is finally spinned and wrapped over the plastic bobbins. In the process, the wvyard of roving is reduced as per the requirement of final yarn. The twist is imparted as per the requirement of ultimate user and the delivered yarn is wrapped on the ring bobbins.

The SQC department keeps utmost care in the section to avoid 'Bonda' waste i.e. due to breakage of yarn. For the purpose a card is pasted on each machine, which contains the information regarding count number, lot no., T.W., B.D. C.P., spindle R.P.M., T.R. number and cleaning date.

The mill then its best to maintain the average count of the material processed. The standard or nominal count is based on the routine wrapping, checks at ring frame and at the earlier stages of processing. The department prepares the wrapping maintenance count report in the following manner since wrapping maintenance of count is a regular routine in the mills of Rajasthan:

Table - III

WRAPPING MAINTENANCE COUNT REPORT

Lot No.	Machine No.	Standard count	Variation Limits	Actual count	Difference
1	1	24's	23.8 to 24.2	23.6	0.4

The department also ensures that the yarn is being produced as per the predetermined norms. If there is a deviation in the count of the yarn, the coarser yarn can be converted into finer yarn and vice-versa with the efforts of the department.

Count means number of hanks of yarn in one pound.

Hank means length of yarn measuring 840 yards is termed as hank.

LEA COUNT VARIATION

The department also prepares a daily report for lea count, and lea test for the single yarn and double yarn in the following manner:

Table - IV

LEA COUNT AND LEA TEST FOR SINGLE YARN AND DOUBLE YARN

Lot No.	Total Frame	Pre determined Count	Actual Count test (lbs.)	Blend %
Double 1		2/40	20.2	48:52
Double 2		2/50	24.3	67:33
Single 1		24	24.2	48:52
Single 2		40	40.8	67:33

Every inch care is taken at each process to avoid the mistake of one count since the mistake of one count may cause a loss of thousands of rupees to a mill. SQC department initiates the corrective action if variation between pre determined count and actual count exceeds the tolerable limit for different lots and different counts. The variation in lea count is analysed by the department and reported in the ANOVA table in the following manner:

Table - V
ANALYSIS OF LEA COUNT VARIATIONS

Bobbin No.	Lea No. 1	Lea No. 2	Lea No. 3	Range for within bobbins calculated from three leas from each bobbins	Range for overall variation calculated from groups of four bobbins	Bobbin Total
1	25.0	25.4	25.1	$25.4 - 25.0 = 0.4$	$29.0 - 25.0 = 4.0$	75.5
2	27.2	26.4	28.5	$28.5 - 26.4 = 2.5$	$28.5 - 25.4 = 3.1$	82.1
3	29.0	26.0	27.3	$29.0 - 26.0 = 3.0$	$28.5 - 25.1 = 3.4$	82.3
4	26.2	28.5	27.5	$28.5 - 26.2 = 2.3$		82.2
Total				8.2	10.5	322.1
Average				4.05	3.5	-
Grand Average						80.5

For waste management it was observed that tests such as effective length, mean length, short fibre %, Mc value, trash contents %, cotton lap tests, lea count and leas test during various processes are conducted at parity in almost all the mills of Rajasthan.

WASTE RECORDS

The following procedure has been followed to record the waste and its test frequency in textile industry of Rajasthan:

Table - VI
TEST FREQUENCY OF WASTE AT THE DEPARTMENTS

Department	Waste	Frequency
1 - Blow Room	(i) Blow Room Droppings	Daily
	(ii) Guffer loss	At the end of each month
	(iii) Lag ends	Daily
	(iv) Invisible loss	At the end of the month
2. Carding	(i) Card Droppings	Daily
	(ii) Flat strips	Daily
	(iii) Cylinder and Doffer Fly	Daily
	(iv) Stripping Waste	Daily
	(v) Silver ends	Daily
3. Frame	(i) Sweeping	Daily
	(ii) Pneumefil Waste	Daily
	(iii) Roving ends	Daily
4. Ring	(i) Bonda Waste	Daily
5. Winding Section	(i) Hard Waste	Daily

MAJOR FINDINGS

1. It was noticed that SQC department was unable to control the minor wastes such as gutter loss and clearer wastes for which it cannot be made responsible since these wastes are beyond control of the department.
2. Moreover, the department cannot be held responsible for controlling hard wastes and sweeping since the respective process is responsible for managing these wastes. The respective department can better control these wastes through good housekeeping and work practice.
3. Furthermore, the respective process should be held responsible for not controlling the process waste as it significantly differs from norms set at national level. These wastes need initiation of technological actions at the level of SQC department.
4. Observed that management of process waste is poor in textile industry of Rajasthan looking to the fact that the process waste ranges between 14 to 15 percent in case of textile mills situated in Rajasthan as compared to 13 percent of standard norms. The difference of waste equal to 2 percent over standard norms is significant. Hence it should be brought equal or below to the industry level to enhance the profitability of the mills.

The following table also justifies the poor management of waste in textile industry of Rajasthan and also indicates that the significant variation in the process waste indicating the responsibility of the responsible department.

Table - VII

VARIATION IN PROCESS WASTE AND FIXATION OF RESPONSIBILITY

Waste	Norms %	Actual % in the state	Variation	Responsibility
Blow Room Dropping	6.02	N.A.		SQC
Card Droppings	2.75	N.A.		SQU
Total Droppings	8.77	N.A.		SQC
		N.A.		-
Guffer loss	0.60	N.A.		Process itself
Flat Strips	1.83	N.A.		
Stripping	0.34	N.A.		
Total Card waste	4.92	5.6	0.68	
Comber Waste	.00	5.4	0.40	SQC
Sweeping Waste	1.92	2.0	0.08	Not SQC
Clearer Waste	2.24	2.36	0.12	Department
Hard Waste	0.28	0.30	0.02	Not SQC
Invisible loss	1 1.51	1 1.69	0.18	-

5. The order for purchasing the cotton for the next month's consumption is placed on the 28th of each month. The purchasing for the reserve stock is made in a particular season since the superior quality cotton at relatively cheaper prices is available in the particular season only. The purchasing is based on the human judgement. It ranks grade and price at first place and the fitness and strength at the second place.
6. The cleaning efficiency of blow room was about 63 percent in almost all the mills situated in Rajasthan as against the standard norm of 70 percent.
7. There is a lack of effective audit system to examine faults at spinning machine and to detect the irregularity in the yarn.
8. Observed that there is a lack of effective system to check over thick and thin imperfections.

SUGGESTIONS

To achieve the object of wealth maximisation through waste management it is imperative need to minimise the cost of the yarn by reducing the wastes. The individual and machine to machine audit should be done to achieve the object.

1. The 'Machinery audit' system should be introduced for the different appliances.
2. The judgement whether to change or not the card wires should be carried through microscope. SQC department should be made responsible for the spindles remained undetected daily due to breakage and missing aprons. It is essential to avoid the loss caused due to idle spindles.
3. Usters Imperfection system should be introduced to check the thick and thin imperfections. The indicator has a choice of four sensitivity levels for each type of imperfections i.e. (-) 30 to 60 percent for thin places; 4 (+ 35 percent) to I (+ 1 00 percent) for thick places, and 4 (+ 140 percent) to 1 (+ 400 percent) for Neps. The recommended limits should be (-) 50 percent; 3 (+ 50 percent) and 3 (+ 200 percent) for thin places, thick places and Neps respectively.
4. The textile industry of Rajasthan further needs automation to bring down the percentage of waste equal or below to industry standard.
5. The linear programming technique suggested by ATIRA with various variants should be adopted by the mills in Rajasthan for cost saving through mixing cotton at minimum cost without impairing the quality. The pre-requisites of the approach are as follows:
 - (a) The well-equipped cotton-testing laboratory in the mill is essential for applying the linear programming,
 - (b) The trained personnel should manage the laboratory,
 - (c) The trained personnel should have the knowledge of operation research.
 - (d) The mill should have the computer facility.
 - (e) The mill should keep at least two months stock of raw materials at any given time.

LEASE : BALLOONING ANALYSIS

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ABSTRACT

Most of the lease transactions in India are finance leases. Balloons are pattern of lease payments wherein rentals do not follow a straight line pattern. In this paper the author has made an attempt to compare the two alternate scenarios. Lease rentals are ballooned at front end one scenario and towards the tails of the lease period in the other one.

The Institute of Chartered Accountants of India has issued an Accounting Standard-19 'Leases' is the effort in directing the accounting for lease in the right direction. Lease rentals should be accounted for on an accrual basis over the lease term so as to recognize an appropriate charge in this respect in the profit and loss account, with a separate disclosure thereof. The appropriate charge should be worked out with reference to the terms of the lease agreement, type of the asset, proportion of the lease period to the life of the asset as per the technical/commercial evaluation and such other consideration. The excess of lease rental paid over the amount accrued in respect thereof should be treated as prepaid lease rental and vice versa.

Balloons are pattern of lease payments wherein rentals do not follow a straight line pattern but are either high or low at the beginning or end of the lease period. The lessor would resort to ballooning to manage his cash and tax flow position. If the lessor is in need of cash and is a zero tax company (even considering MAT) he would balloon the lease rentals towards the end of the lease period. The lease rentals in the initial period would be lower thereby reducing the lessor's tax burden. It is also remembered that the lessor is taxed on the lease rental income as established under the lease contract and not on the IRR income as determined under the Guidance Note (GN) on Accounting for leases issued by the Institute of Chartered Accountants of India. Another way of ballooning is possible through the determination of the lease period and within it, the determination of primary and secondary lease period.

A zero tax lessee with a cash flow problem, would prefer lower lease rentals in the initial period compensated by higher lease rentals towards the tail of the lease term and vice versa. In our example let's consider the following two scenarios keeping IRR constant @ 15.238%. (I) Lease rentals are ballooned front end (Scenario A), (II) Lease rental are ballooned towards the tail of the lease period (Scenario B).

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Table - I
BALLOONING ALTERNATIVES

Year	Scenario A (Rs.)	Scenario B (Rs.)
0	10000	10000
1	4000	2534
2	4000	2534
3	2053	2534
4	2053	4000
5	2053	4000
IRR	15.238%	15.238%

As usual, the lessor will have to split the lease rental into principal and interest @ 15.238% IRR. The split up into principal and interest is given in Table II.

Table - II
FINANCE INCOME IN BALLOONS

Year	Scenario A				Scenario B			
	Principal	Lease rental	Interest	Principal	Principal	Lease rental	Interest	Principal
	Outstan- ding (a) Rs.	(B)C=(a) Rs.	15.238% Rs.	d=b-c Rs.	Outstan- ding (a) Rs.	(B)C=(a) Rs.	15.238% Rs.	d=b-c Rs.
1	10000	4000	1524	2476	10000	2534	1524	1010
2	7524	4000	1146	2854	8990	2534	1370	1164
3	4670	2053	712	1341	7826	2534	1192	1342
4	3329	2053	507	1546	6484	4000	988	3012
5	1783	2053	270	1783	3472	4000	528	3472
	Total	14159	4159	10000	Total	15602	5602	10000

Depending on how the balloon is structured, the IRR (interest) income of the lessor will vary in the two scenarios. Though the discounted tax burden is same in both scenarios (as explained under), the cash outflow on tax is higher in the initial years in Scenario A. Therefore, Scenario A is preferable where the lessor has benefit of huge carry forward tax losses or is zero a tax company. As earlier mentioned, the choice will be made by the lessor depending on his cash flow and tax position and of course the requirements of the lessees as well.

Table - III
TAX BURDEN

Year	Scenario A			Scenario B		
	Lease rental	35% tax	Tax discounted @ 15.238	Lease rental	35% tax	Tax discounted @ 15.238
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	4000	1400	1215	2534	887	770
2	4000	1400	1054	2534	887	668
3	2053	7149	470	2534	887	580
4	2053	719	407	4000	1400	794
5	2053	719	354	4000	1400	688
	14159	4957	3500	15602	5461	3500

The tax position on balloons or where there is a lease moratorium period is a subject of debate with the tax authorities. The above table may therefore undergo changes depending on the position taken by the tax authorities.

Table- IV
STRAIGHTENING OF BALLOONS

Year	Scenario A			Scenario B		
	Lease rental	Profit and Loss Charge	Asset/ (Liability) created each year end Rs.	Lease rental	Profit and Loss Charge	Asset/ (Liability) created each year end Rs.
	Rs.	Rs.		Rs.	Rs.	
1	4000	2831.8	1168.2	2534	3120.4	(586.4)
2	4000	2831.8	1168.2	2534	3120.4	(586.4)
3	2053	2831.8	(778.8)	2534	3120.4	(586.4)
4	2053	2831.8	(778.8)	4000	3120.4	879.6
5	2053	2831.8	(778.8)	4000	3120.4	879.6
	14159	14159		15602	15602	

Annual Profit and Loss charge = Lease rentals ÷ No. of Years

= Rs. 15602 ÷ 5 = Rs. 3120.40

In Scenario A, the lease rentals are higher than the profit and loss charge in the initial period which gives rise to an asset which reverses as the lease progresses. In Scenario B, the lease rentals are lower than the profit and loss charges in the initial period which gives rise to a liability which reverses in later years when lease rentals are higher than the profit and loss charges.

ANALYSIS OF INVESTOR'S BEHAVIOUR PATTERN IN TAMIL NADU

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**Dr. R. Rangarajan

ABSTRACT

The paper makes an attempt to analyse investor's behaviour pattern in Tamil Nadu by using suitable statistical tests. The study found that the investors in Tamil Nadu are more conscious of security.

All the financial institutions, other industries and companies were vying with one another to get the surplus funds for their requirement. This had culminated into a wide range of investment opportunities. The market had been flooded by a lot of information detailing the investment opportunities. Also new avenues of investment had appeared on the scene. In the light of surfeit of investment opportunities, in view of newly emerging investments and in the face of severe competition for investible funds, the study of the process of investment decision by the Tamil Nadu investor is quite relevant. The general objective of the study was to check whether the average Tamil Nadu investor invested rationally giving major importance to security, tempered by profitability, liquidity etc.

METHODOLOGY

Scales were given to quantify the level of knowledge of the investor to correlate it with over-all investment decision. Similarly, correlation was worked out among other factors. With the criteria for investment as independent variables and return from the investment as dependent variable, a multiple regression equation was constructed. Taking the diversification according to criteria an investment mix was calculated. With the objective of maximising returns from investments, a linear programming model was constructed with the constraints of criteria for investment and risk involved in investment. Projection technique was employed to arrive at the maximum possible income that could have been earned by changing the criteria. Matrix analysis was used to find decision theory and to get the best return from investment. Since several factors impinge on rate of return, a multiple correlation was worked out to find the relationship.

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With criteria of security and business risk as constraint conditional probability was calculated. Binomial bi-variate distribution was employed to assess the return from investment. Consistency of return was found through co-efficient of variation. Profitability of borrowing for investment and erosion of value of return due to inflation were also worked out. Chi-square and F-Test were conducted to check the validity of sample data.

ANALYSIS

Age and amount invested had a high degree of positive correlation (0.67). Education and amount invested had a negative correlation (-0.57). Higher level of income has led to greater level of investment had a positive correlation (0.724). Urbanisation is found to be not a prerequisite for investment inclination had a negative correlation (-0.22). Investment atmosphere leads to more investment expressed by a positive correlation (0.904). Awareness of avenues of investment definitely influences amounts invested (Correlation with knowledge level-1, 0.704 and with knowledge level-2 0.58) Correlation values in all these cases were found to be significant. (7)

With return from investment as dependent variable (y_1) and Security (x_1) and Liquidity (x_2) as independent variables, the regression equation worked out as $y_1 = 225.35 + 2.00x_1 + 5.341x_2$. Similarly, the multiple regression equation with return from investment (y_1), Security (x_1) and Profitability (x_2) was arrived at as $y_1 = 280.898 - 10.77x_1 + 2.05x_2$.

The investment mix equation came out as $23\%S + 37.5\%L + 9.67\%P = \text{Rs. } 7,39,750$ where S stands for Security, L for Liquidity and P for Profitability. Ideal investment mix could be worked out by reducing security and increasing profitability correspondingly.

With security criterion and liquidity criterion as independent variables and return from investment as dependent variable, multiple correlation worked out to 0.4537. This reveals that security acts as a constraint and liquidity too has a dampening effect on the rate of return to a certain extent. Probability analysis was performed using Bayes' theorem with security and business failure as risks. The combined probability value was converted into a binomial Bi-variate distribution. With the constraints given by the probability 0.065, the returns from the investment are given by the probability 0.935.

Consistency of yield found through Co-efficient of Variation, was given by Statutory Organisations, followed by Government, Public Limited Companies and Nationalised Banks in the orders. Borrowing for investment is seen to be profitable as rate of return was slightly reduced from 3.51/per rupee to 2.98/per rupee. Chi-square and F-tests of validity confirmed that the sample values truly reflect the population.

FINDINGS

There is a distinct male bias in the investors of Tamil Nadu. They are found to be in the age group of 20 to 50. Mostly the respondents are in the category of Higher Secondary or Graduates. Businessmen and self-employed professionals dominate the investor's clan and

the background naturally is urban. Family influence is mostly from forefathers, and that too, males. They absorb the spirit of investment by living in a commercial area. Mostly, they are married with a nuclear family. Majority of them are Hindu Tamils, with an annual income of Rs. 1,00,001 to Rs. 3,00,000/-.

Amount available for investment was between Rs. 20,000 and Rs. 1,00,000. The investors had knowledge of usual avenues of investment like bank deposits. Source of information was through friends and journals. In the criteria for investment, Private Finance Companies, Private Companies and New Emerging Investments are rated high for Profitability.

Security wise diversification was predominant, the choice ranging among Public Limited Companies, Nationalised Banks, Statutory Organisations and Government Securities.

Regarding risks attached to investment securities of Government, Statutory Organisations, Nationalised Banks and Public Limited Companies were classified not risky in respect of market and business failure. Maximum income was derived from securities of Government, Statutory Organisations and Public Limited Companies. Income obtained criteria wise was from Security, Liquidity and Tax-concession. Loss was only upto Rs. 5,000, mainly due to non-payment of principal and interest and business failure.

Periodicity of income received was monthly and quarterly. Unsatisfactory return was from Statutory Organisations, Nationalised Banks and Public Limited Companies. Maximum was reported from private companies.

On the whole, the average Tamil Nadu investor is more conscious of security and does prefer to take any risk. Naturally, he does not choose much of New Emerging investments or indulge in speculation for increasing his income.

♦ ♦ ♦

INDUSTRIAL ENGINEERING - ACCOUNTING INTERFACE

*Dr. G. Soral

ABSTRACT

Industrial Engineering and accounting are two different disciplines. The paper makes an attempt to explore interface between industrial engineering and accounting. Accounting as a science of quantitative information and measurement has drawn upon various subjects like economics, finance, statistics, computers etc. Depending upon the emergence of the subject and contemporary needs, such interfaces have strengthened the discipline of accounting and added to its relevance. The present paper is a attempt in the area of Industrial Engineering (IE).

IE is mainly concerned with use and cost of resources in an organization and basically focuses on improvement of productivity.¹ IE has been identified as a branch of engineering distinguished from other disciplines because -²

1. It places increased emphasis on the integration of the human being into the system.
2. It is concerned with total problem
3. It predicts and interprets the economic results.
4. It makes greater utilization of the contribution of Social Sciences than the other engineering disciplines.

The aforesaid distinguishing features further clarify the role of IE as a management service function. In order to accomplish this role, the various functions performed by IE staff may be listed down as follows³ :

- Methods Engineering
- Work Measurement
- Control Determination
- Wage and Job Evaluation
- Plant Facilities and Design

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ACCOUNTING - IE INTERFACE

In order to examine accounting - IE interface, this will be worthwhile first to appraise the functional utility of accounting information. Five purposes of such information have been laid out.⁴

1. Formulating overall strategies and long term plans: This includes new product development, long term investments etc.
2. Resource allocation decisions such as product and customer emphasis and pricing : This includes profitability reports of distribution channels, brands, customers etc.
3. Cost planning and cost control of operation and activities.
4. Performance evaluation and measurement of people.
5. Meeting external regulatory and legal reporting requirements.

Most of the above purposes indicate vicinity of accounting with the discipline of IE. An elaborated picture of the same is portrayed in Table which contains the recent course outline of Indian Institution of Industrial Engineering (IIIE), Graduateship Examination.

Course outline for Indian Institution of Industrial Engineering Graduateship Examination showing Interfaces with Accounting Curricula.⁵

Title	Interface*
PRELIMINARY	
IE001. Business Communication	✓
IE002. Economics and Indian Economic Environment	✓
IE003. Mathematics for Engineers	✓
IE004. Introduction to Computers	✓
IE005. Engineering Drawing & Computer Graphics	x
IE006. Materials Science	x
Section - A	
IEA01. Probability and Statistical Methods	✓
IEA02. Operations Research	✓
IEA03. Business Accounting and Costing	✓
IEA04. Principles and Practices of Management	✓
IEA05. Work Systems Design	Yes
IEA06. Manufacturing Technology	x
IEA07. Information Technology and Systems	✓
IEA08. Systems Approach	✓

Section - B

IEB01. Operations Management	Yes
IEB02. Total Quality Management	Yes
IEB03. Total Supply Chain Management	Yes
IEB04. Facilities Planning and Management	x
IEB05. Innovation and Value Engineering	Yes
IEB06. Technology Management	x

OPTIONAL SUBJECTS (any two)

(One Subject from one group)

	IEE01. Strategic. Management	✓
Gr. I	IEE02. Advanced Operations Research	Yes
	IEE05. Energy Engineering and Management	x
Gr. II	IEE03. Human Resource Planning & Development	✓
	IEE07. Automation Technologies	x
	IEE04. Environmental Management	
Gr. III	IEE08. Total Productivity Management and Business Process Re-engineering	Yes
	IEE10. Managerial Finance	✓
Gr. IV	IEE06. Maintenance Management	x
	IEE09. Business Process Simulation	x

*(✓) Already Covered, (x) Not to be covered, (Yes) To be covered

As indicated in Table, majority of papers for the graduateship examination of IIIE are already covered under different accounting (and other business related) curricula. About one-third papers however are not relevant to the accounting arena. The balance of seven papers have contents which may further have scope for accounting curricula to include. The detailed course contents (available with author) of these papers suggest that the same may be used as guidelines to strengthen accounting curricula. A separate paper with the title of IE comprising various concepts scattered among (possibly) different papers, should be introduced. This would not only nurture down-to-earth treatment of the subject but also add to the brand image thereof. Further, professionals on both the sides should interact more often to benefit the disciplines.

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3. Ibid., p. 1-18.
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5. Indian Institution of Industrial Engineering : Syllabus for Graduateship Examination.



CONVERGENCE ACCOUNTING

*Dr. A. K. Chakrawal

ABSTRACT

Initially, the paper identifies the features of accounting education in the new millenium. After looking into the projected hierarchy of accounting education, the concept of convergence accounting is developed.

Accounting education in the new millennium is the talk of academicians all over the globe today. May be my apprehension is wrong, but do we have that much vision, imaginary power and precise forecasting ability to project the picture of accounting education what exactly will be happening in the period 1000 years ahead? Every rationale human beings/ academicians answer will be in negation. I do have firm believe that human civilization is yet to wait for having capability of predicting 1000 years events.

FEATURES OF ACCOUNTING EDUCATION IN THE NEW MILLENNIUM

Talking precise about future is difficult; future can be thought out, but if it accompanied by logic, rationale, and in depth analysis of present state and ongoing changes in the particular field, something concrete can be found out of future happening in the same field. Few reflections of scenario of accounting education in the new millennium may be similar to the following thoughts:

- ♦ Compulsory accounting education will be introduced from Pre-SSC level (Junior High School) (see Exhibit No.1).
- ♦ Computer education will be the part of accounting education from the very beginning.
- ♦ Accounting education in the new millennium will be more of practical (on job / training/article ship) nature apart from initial theoretical education.
- ♦ Practical training of accounting practices will start from initial year of graduation courses.

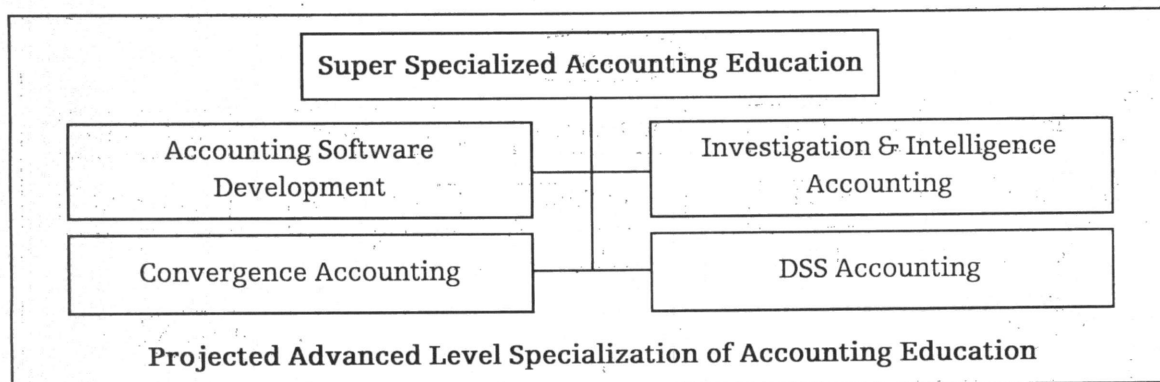
- ♦ Broader specialization area will be elected at the very start of graduation courses. They may be financial accounting, cost accounting, taxation accounting, social accounting, management accounting, services accounting and auditing.
- ♦ Altogether new specialization areas will emerge with newer set of accounting techniques.
- ♦ Accounting education will take a global shape to cater worldwide accounting/auditing requirement.
- ♦ Some sort of cyber/online/virtual accounting education will emerge in a big way.
- ♦ Convergence Accounting will be the biggest break through in accounting education the new millennium.
- ♦ Some kind of interactive self learning accounting education software will be available in the new millennium, and a substantial number of accountants will get self trained through such software.
- ♦ Investigating accounting education will be on high demand due hi-tech kind of malpractice in the new millennium.

EXHIBIT NO. I

LEVELS	CURRICULUM	STANDARDS
Level I	Fundamental Accounting Education	VIII, IX, X
Level II	Advance Accounting Education	XI, XII
Level III	Specialized Accounting Education	Graduation
Level IV	Super Specialized Accounting Education	Post Graduation
Level V	Research for New Dimensions	Doctoral Degree
Projected Hierarchy of Accounting Education		

- ♦ Software development will become a common phenomenon for accountant and therefore such skills will very much closely combined with accounting education.
- ♦ Team accounting will become a regular feature, to develop such professionalism some special kind of training will be imparted to the accountants.
- ♦ Worldwide accounting standards and generally accepted accounting principle (GAAP) will reach to a greater number of common consensuses. Accordingly these principles and standards will be taught to the accountants in similar manner world wide.

EXHIBIT NO. II



CONVERGENCE ACCOUNTING

Convergence Accounting (CA) may occur in several forms. It is a concept in process of formation. The underlying philosophy is to cover every accounting activity and its associated activities under one shade; in other words several accounting facilities and ancillary services will be available at one window in the name of CA. Financial accounting, taxation, auditing, cost accounting, accounting for services, decision support accounting, financial analysis, consultancy, etc. will be the main constituent of Convergence Accounting. Convergence Accounting is supposed to benefit multinational companies in big way. By application of CA multinational companies will be able to transform one country's accounting statement into another country's accounting format. Concerns, willing to join hands with firms situated abroad, will be able to analyze the situation better with the help of CA.

Convergence accounting is a futuristic concept of accounting covering every possible activity of accounting, which provides real time multi-facilities at one window. Moreover, since convergence accounting is intended to be omnipresent, it transforms one country's accounting statement into another country's readable format. A few details of convergence accounting are as follows:

Status : Not existing.

Future : Later or sooner Convergence Accounting will come into existence.

Nature : Convergence Accounting is of multi-disciplinary nature.

Scope : Includes every possible aspect of accounting.

Area : Convergence Accounting is applicable to every economic activity across the world.

Objective : True and fair accounting.

Aims : Real time accounting, price-level accounting, etc.

EXHIBIT NO. III

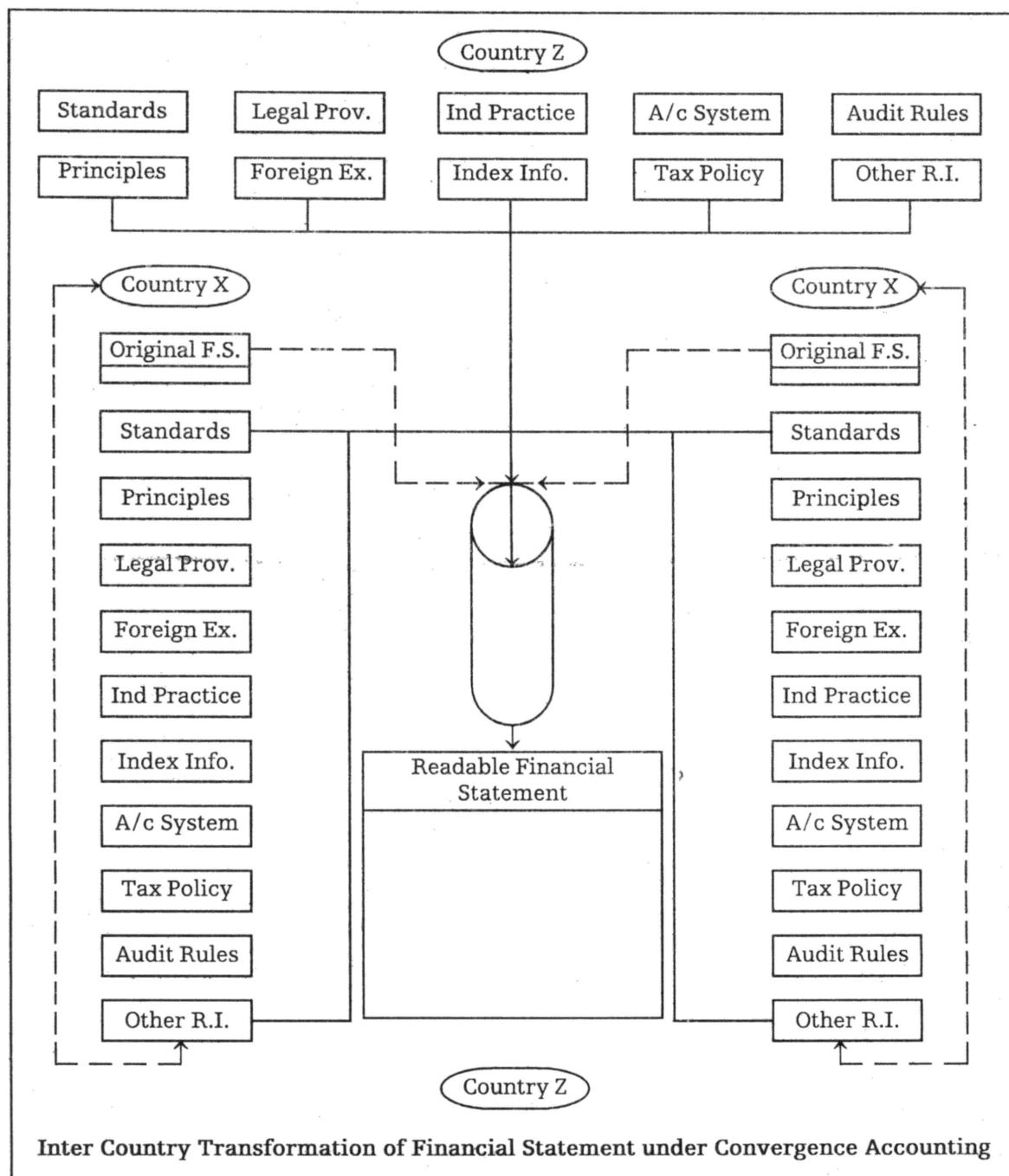
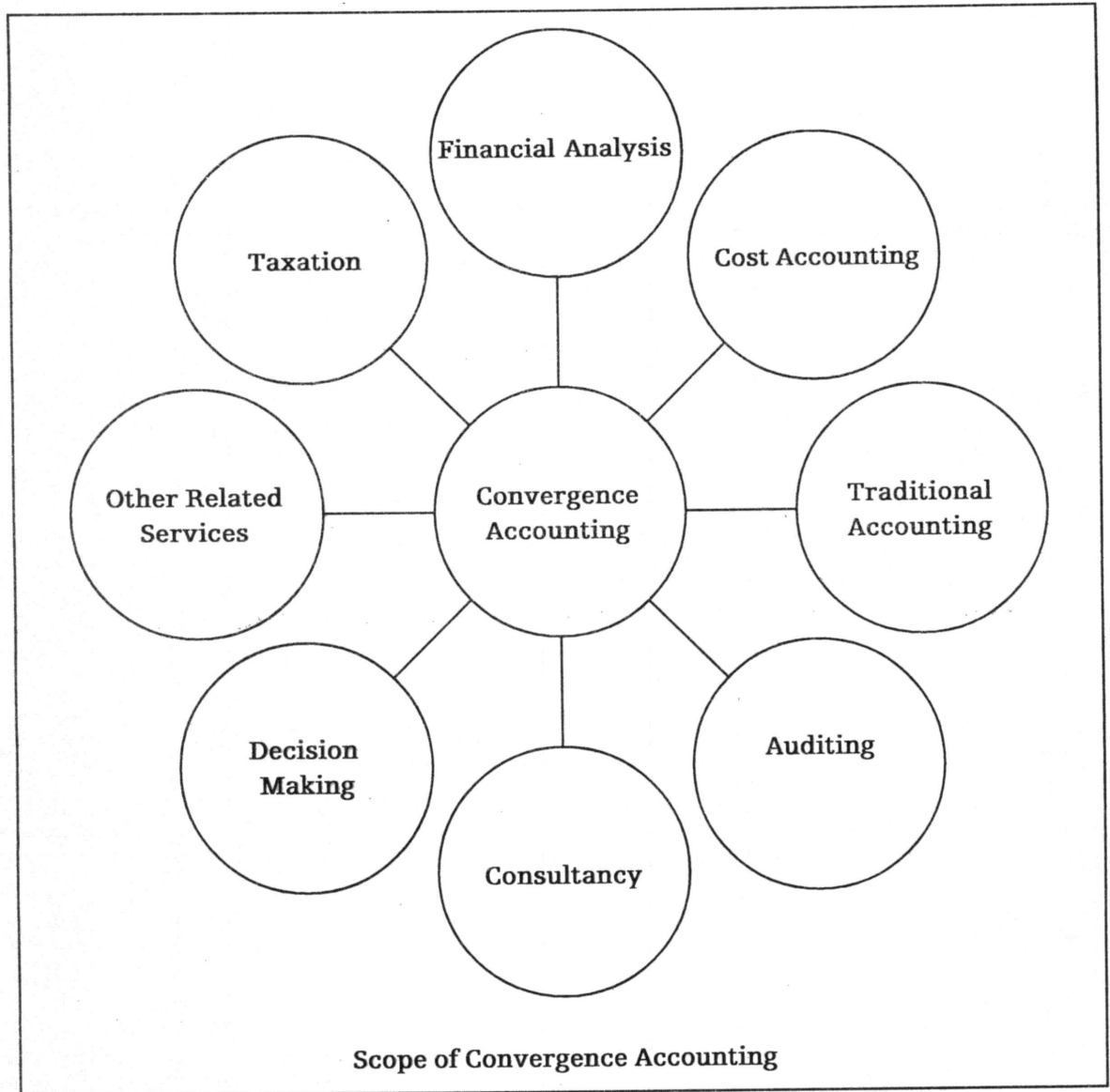


EXHIBIT NO. IV



Thinking about future is human. Being futuristic is always beneficial. Human being can judge its interests better. An academicians in a human being can judge its interest even better. The aforementioned reflections of accounting education in the new millennium are positive thoughts for the betterment of accounting education. May be some of the reflections are beyond acceptance. But such non-acceptance is again a good sign if it contributes something constructive over the unacceptable reflections.

BOOK REVIEWS

STRATEGIC COST MANAGEMENT

Editors : A. K. Basu, S. Banerjee and D. K. Dandapat

At the outset of the new millennium, fast changes are taking place in political, social, technological, environmental, cultural and economic all around the world. The Strategic cost management is the one of the thrust areas. The profitability, survival and growth of a business firm largely, depend upon satisfaction of customers towards the quality of cost of product. The management of every company has to lay greater emphasis on the cost management with developing new and advanced strategic approaches. The New Approaches in growing strategic cost management includes: Theory on constraints (TOC), Activity based costing (ABC), Throughput Accounting (TA), Total Quality Management (TQM), Just In Time (JIT), Optimized Production Technology (OPT), Cost of Quality (COQ), Target Costing (TC), Product life cycle (PLC), Life cycle Costing (LCC)

This book provides a deep insight to the practicing cost management professionals, business executives and academics in the field of cost management. The book contains high quality of papers on strategic cost management contributed by the experts representing industry, profession and academics. A few of them are : Throughput Accounting, Theory of Constraints and Activity-based Costing, Application of Life Cycle Costing in the Field of Strategic Cost Management, Target Costing : A third Wave View of Sustainable Value Creation for Corporate Strategic Advantage, Activity-based Costing, Activity-based Costing: Implementation, Quality Cost Management.

The book is published by Department of Commerce, University of Calcutta under Special Assistance programme of UGC. This book is useful to the researchers, academicians, and students of commerce and management especially, to the cost management. It is also equally useful to the practicing professionals, policy makers and analysts.

Dr. D.D. Meena, Reader, JNIBM, Vikram University, Ujjain (MP)

REGULATION OF CORPORATE ACCOUNTING AND REPORTING IN INDIA

Author : Bhabhatosh Banerjee

Accounting regulation has gained importance over last few years as it involves some key issues like governance, administration, surveillance, supervision, legislation etc. The emergence of corporate sector at National and International level has immensely contributed to regulation.

The book takes a broader look on Accounting Regulation. It specified in detail the meaning and uses of Accounting Regulation. Bhabhatosh has taken up the cause of Accounting Regulation and its need and has stressed that the same be backed up by other emerging dimensions as Social Audit and Social Reporting. The Chapter on Role of Government and Voluntary Bodies discuss the role of various Government Agencies such as DPE, SEBI, Stock Exchange and Voluntary organisations. International scenario on Corporate Accounting Regulation is taken up with specific reference to UK, USA & Japan.

A sample of 25 companies from group A listing on Stock Exchange and another sample of 25 companies from group B are taken up for the study and their Reporting Practices are examined in detail. An interesting case study on EVA (Economic Value Added) in respect of Hindustan Lever Ltd. is taken up for study. A comprehensive list of 25 items were identified and were examined for Reporting/Non-reporting by the companies. A separate chapter discussed the case study on users perception of corporate reporting. 53 respondents from 12 states were selected and their response were elicited using questionnaire method. Majority of users opined that the present system of regulation of accounting through Companies Act be continued.

The strengths of this book are its simplicity and the author's capacity to put forward ideas in a lucid manner. The complex nature of corporate accounting regulation is dealt with lucid style. The book will be usual to consultants, practicing managers and students dealing with corporate accounting world.

Dr. Deepak Gupta, Reader, JNIBM, Vikram University, Ujjain (MP)

IAA NEWS

ANNUAL GENERAL MEETING NOTICE

Sep. 1, 2002
Vishakhapatnam

A meeting of the IAA General House will be held at the Venue of 25th Annual Conference, Jodhpur with Prof. Sugan C Jain in the Chair on 22nd Dec. 2002 at 12.30 p.m. to transact the following agenda :

1. Consideration of the minutes of AGM meeting held at Tirupathi
2. Consideration of the Accounts of the Association
3. Topics for the next IAA Annual Conference
4. Election of Executive Members as per the Constitution
5. And any other item with the permission of the Chair.

All the members are requested to attend the meeting.

Prof. D. PRABHAKARA RAO

General Secretary, IAA (iaa.intelligentbrains.com)

emial : iaa-dprao@sify.com, Phone : 0891-755538

EXECUTIVE MEETING NOTICE

Sep. 1, 2002
Vishakhapatnam

A meeting of the IAA Executive Committee will be held at the Venue of 25th Annual Conference, Jodhpur with Prof. Sugan C Jain in the Chair on 21st Dec. 2002 at 8.30 p.m. to transact the following agenda :

1. Consideration of the minutes of EC meeting held at Tirupathi
2. Nomination of 3 members of EC to constitute panel nominating the Jr. Vice President.
3. Consideration of the election of the members on vacancies as per rules.
4. Co-option of members to EC.
5. And any other item with the permission of the Chair.

All the Executive Members are requested to attend the meeting.

Prof. D. PRABHAKARA RAO

General Secretary, IAA (iaa.intelligentbrains.com)

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IMPORTANT ANNOUNCEMENT

In the Special Annual General Meeting of IAA held at Tirupathi on 14th Sep. 2001, at 13.15 with Prof. K. Eresi, in the Chair, it is unanimously resolved to increase the subscription rates of IAA w.e.f. 1st May 2002 as per the following :

	Life	Annual
Individual	Rs. 1500 (from Rs. 1200)	Rs. 300 (from Rs. 200)
Institutional	Rs. 5000 (from Rs. 3000)	Rs. 1000 (from Rs. 500)

SIXTH INTERNATIONAL ACCOUNTING CONFERENCE**of IAA Research Foundation**

Crystal Room, Taj Bengal (Kolkata)

11-12 January, 2003

The theme of the Indian Accounting Association Research Foundation's 6th International Accounting Conference is Changing Dimensions of Accounting and Finance : Issues and Strategies. Papers are invited on the following topics : (1) International Accounting & Finance; (2) Transparency in Corporate Accounting Practices; (3) Corporate Failures : Role of accounting & financial systems; (4) Accounting for Financial Instruments; (5) Accounting Education, Research and Practice; (6) Earnings Management; (7) Green Accounting; (8) Auditing in the context of recent global economic experience : independence, techniques and reporting; (9) Government Accounting; (10) Mergers, Demergers and Acquisitions; (11) Other related international business topics.

Prominent scholars and academicians from different parts of the world are expected to attend the Conference. **Prof. Shyam Sunder, James L. Frank Professor of Accounting, Economics and Finance, Yale School of Management, U.S.A.,** will deliver the keynote address on 'Rethinking the Structure of Accounting and Auditing Regulation' in one of the Plenary Sessions. **Professor Rajendra P. Shrivastava of Kansas University, Professor Gyan Chandra of Miami University, Oxford, both from the U.S.A.,** are also expected to attend and chair sessions. There will be a number of concurrent sessions.

GUIDELINES FOR PAPER SUBMISSION :

(1) Each contributor is required to submit 2 (two) typed (double-spaced) copies of the full paper; (2) There should be a separate title page on each paper giving details of author/s, affiliation, address, telephone and e-mail; (3) Papers must be received within **October 10, 2002**; (4) Notification about the acceptance or otherwise of a paper will be made by **November 11, 2002**; (5) Papers submitted for presentation will be subject to blind review and the decision of the Technical Committee will be final; (6) Submission of a paper by e-mail will not be acceptable.

REGISTRATION FEES :

(1) Members of Indian Accounting Association : Rs. 2,000 each; (2) Others : Rs. 2,250 each; (3) Accompanying spouse : Rs. 1,250 each; (4) For accommodation (in guest house/YMCA, etc. for 3 nights) : Rs. 500 each per person on a double sharing basis. **Deadline for registration : December 20, 2002. Early bird registration fees (by November 15, 2002) :** Members of IAA Rs. 1,500 each; Others Rs. 1,800 each.

Send your queries, registration of interest, paper, etc. to -

Prof. Bhabatosh Banerjee

164/78, Lake Gardens, Flat B-10, Kolkata - 700 045

E-mail iaarf@cal3.vsnl.net.in

25th ALL INDIA ACCOUNTING CONFERENCE**21-22~~nd~~ December 2002** 1-2 Feb, 03

Organised Jointly by IAA Jodhpur Chapter and
Department of Accounting, J.N. Vyas University, Jodhpur

- International Seminar :** **Accounting Education and Research**
Chairman : Prof. Rajendra P. Srivastava (Awaiting Consent)
Director, Ernst Camp,
Young Centre for Auditing Research and Advanced
Technology.
School of Business, The University of Kansas.
- Technical Session I :** **Measuring Corporate Performance : Balanced Score Card Applications**
Chairman : Prof. G.C. Maheshwari
Prof of Accounting, Deptt. of Management Studies
M.S. University, Vadodara (Gujarat), Dial : 0265-795315
- Technical Session II :** **Transfer Pricing**
Chairman : Prof. J.D. Agarwal
Chairman, Indian Institute of Finance
Community Centre II, Ashok Vihar II, New Delhi - 110 052
Dial : 011-7451313

Contributors are requested to send their paper latest by **15th November 2002**. Paper be sent directly to The Session Chairman and the copy of the paper (MS-Word 2000 on 1.44 MB Floppy Disk is preferred) be sent to The Conference Secretary, **Dr. B.S. Rajpurohit, Head, Deptt. of Accounting, J.N. Vyas University, Jodhpur, (Raj.)**. Papers are subjected to technical evaluation through blind review process.

You are welcome to send the paper through e-mail at : acctg_jnvu@datainfosys.net.in

For further details please contact

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e-mail : dr Rajpurohit@hotmail.com

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3. Maths, Physics and Chemistry 4. Maths, Electronics & Computer
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7. Zoology, Fisheries and Chemistry

B.A. : 1. History, Economics and Politics 2. Special English, History & Politics
3. Public Administration, History and Geography
4. Foreign Trade Practices and Procedures, Economics and Industrial Relations

B.Com.: 1. Telugu Medium 2. English Medium

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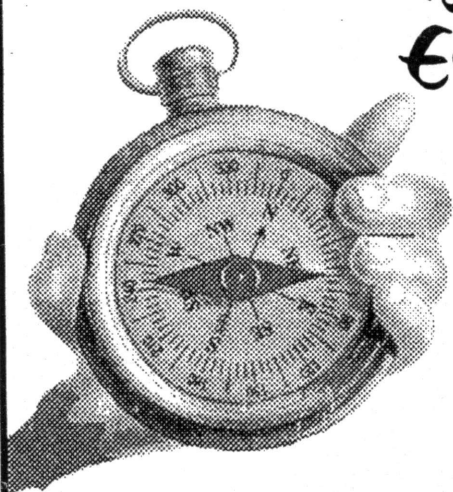
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