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MANDATORY ADOPTION OF IND AS (IFRS CONVERGED STANDARDS): A STUDY ON DISCLOSURE PRACTICE OF INDIAN COMPANIES

Professor (Dr.) Satyajit Dhar*

ABSTRACT

Indian financial reporting is having a historic and landmark change through the transition from Indian GAAP to Ind-AS from annual period beginning on or after April 1, 2016. Convergence with IFRS set of standards is made in India with carve outs to take care of local issues relevant to the country. IFRS converged standards are known as Indian Accounting Standards (Ind-AS) and containing a good number of carve outs from IFRS. The study analyzes the disclosure practice of companies who are required to adopt Ind-AS in the first phase w.e.f. 1.4.2016. The companies are selected on random basis from the population of Listed first phase Ind-AS adopters. The disclosures in 2015-16 financial year (FY) or 2015 calendar year along with disclosures in the interim financial results of the first quarter of 2016-17 are studied . The results of the study indicate that there is wide diversity among the sample companies regarding disclosure on Ind-AS adoption. A depth analysis of contents of disclosure reveals the companies are not forthcoming with detailed disclosure. It may be hoped that quality of disclosure will improve over time and the issues of diversity will be addressed over time through learning process and regulatory interventions.

KEYWORDS: *IFRS, Financial Reporting, Convergence, Ind-AS, Emerging Markets,.*

Introduction

Indian financial reporting is having a historic and landmark change through the transition from Indian GAAP to IFRS converged standards from annual period beginning on or after April 1, 2016. Convergence with IFRS set of standards is made in two ways. One is adoption of IFRS set of standards in totality and other is preparation of IFRS converged set of standards with carve outs to take care of local issues relevant to the country concerned. India has taken the second method of adoption and its IFRS converged standards are known as Indian Accounting Standards (IndAS) and containing a good number of carve outs from IFRS. The Ministry of Corporate Affairs(MCA) has laid down the road map for application of IFRS converged standards(Ind AS) to Indian companies in a phased manner and mandatory phase has started from the financial year beginning on or after April 1, 2016 for listed companies meeting prescribed threshold conditions.

Against this backdrop, the study is aimed to analyze the disclosure practice of companies who are required to adopt Ind AS in the first phase w.e.f. 1.4.2016. The companies are selected on random basis from the population of Listed first phase Ind AS adopters. The

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disclosures in 2015-16 financial year (FY) or 2015 calendar year along with disclosures in the interim financial results of the first quarter of 2016-17 are studied. The data regarding disclosure were first handpicked from Annual Reports and quarterly financial result submitted with stock exchanges. The paper also investigates the impact of IFRS adoption on quarterly results of the sample companies.

This is a unique study on impact on quarterly financial results of mandatory IFRS converged standards on quarterly financial results. Some earlier studies have dealt with such impact for voluntary adoption. But voluntary adopters may have different incentives for preparation of financial statements based on IFRS. Our contribution to literature includes study on disclosures in quarterly results.

The remainder of the paper is designed as follows: Section 2 gives a brief overview of the literature relevant to this paper. The journey of IFRS implementation in India and important events are discussed in Section 3.Section 4 provides details about data and methodology adopted. Section 5 focuses on the findings relating to the extent of disclosure in the interim results and diversities in such disclosures. In section 6, impact of Ind AS adoption on profit of sample companies is reported and analyzed. The final section concludes the paper.

Review of Earlier Studies

In general, accounting literature provides evidences that accounting qualify has significant bearing on economic decision making of stakeholders and thus it has economic consequences. Obviously, change of GAAP is likely to affect accounting quality. There are a good number of studies, mostly, in the context of European Union Countries, dealing with economic consequences of accounting standard changes. It is argued that IFRS adoption will increase the accounting quality and following economic consequences may follow:

- Information asymmetry should decrease.
- Earning management should decrease.
- Accounting data should be more value relevant.
- The cost of capital should decrease.
- Efficiency of capital allocation should increase.
- Mobility of capital should increase.

Soderstrom& Sun (2007) is a good review article on IFRS adoption and accounting quality. Some important studies in this area include Ashbaugh & Pincus (2001), Cuijpers & Buijink (2005), van Tendeloo & Vanstraelen (2005), Barth *et.al*. (2006), Bushman *et.al.* (2006), Hung & Subramanyam (2007), and Armstrong *et.al.* (2010).

IFRS implementation and related issues are studied from different perspectives. The important areas of different studies may be divided into following categories.

- Motivation behind convergence with IFRS set of standards.
- The level of convergence with IFRS among different countries adopting IFRS.
- The processes of IFRS implementation and differences of these processes.
- Effects of IFRS implementation particularly, effects on quality of financial reporting comprising areas like comparability, transparency, disclosure etc.
- Effects of implementation of IFRS accounting system on the financial performance and financial position of reporting entities.
- Value relevance of IFRS based accounting. Value relevance implies the ability of accounting number to predict changes in the market value of shares of reporting entities.

As our study relates to above sub-topics, we concentrate on those and also discuss India related studies on the process of IFRS implementation.

Convergence with IFRS may be formal and generally imposed through regulatory process. This is called convergence (Craner *et al*.,2000). Studies on the implementation process give stress on the issue of the impact of the national movement. It is assumed that local political and economic institutions have a great impact on the level of convergence and enforcement (Ball, 2006). A good number authors posit that international differences in the financial reporting practices will not disappear and diversity will exist as such differences are endogenous and interpretations are influenced by accounting culture and past practice of the country concerned (Tokar, 2005;Schipper,2005; Hoogerdoorn,2006;Alexander and Servalli, 2009). Studies on convergence process also deals with a particular country or a few countries together. Albu *et al.,* 2011 is a detailed study about IAS/ IRFS implementation in Romania. The study investigates in depth the two stages of IAS/ IRFS implementation and reports that the outcome of implementation is more significant in the 2^{nd} stages although it covers only listed companies.

Jermakowicz *et al*. (2006) analyzed the process of implementation of IFRS European publicly funded companies and according to the authors approach towards conversion (i.e., only consolidation or comprehensive beyond consolidation) is important to harness the benefits of conversion to IFRS set of standards.

The study by Fearnley and Hines (2007) attempted to trace the development of attributes towards IFRS convergence before 2005. It is argued that from the perspectives of smaller companies, IFRS is overly complex and the needs of Small & Medium Enterprises are not given due importance in the convergence process. Similarly, the study of Chand & White (2007) on convergence of domestic standards with IFRS indicates that the influence of Multinational Enterprises and big accounting firms has a role in transfer of economic resources in their favour and in most of the cases the interest of general public of the country concerned is ignored.

There is lack of empirical studies in Indian context on IFRS adoption. Most of the studies are descriptive in nature or case study type. Jain (2011) discusses about opportunity and challenges of IFRS implementation in India. Swamynathun & Sindhu (2011) examined impact on financial statements due to adoption of IFRS. It is a case study on Wipro Ltd. The study concluded that IFRS is less conservative than Indian GAAP as in IFRS based financial statements total assets have been increased. Bhargava & Sikha (2013) also examined impact of IFRS adoption for Wipro Ltd. This study examined the effect on financial ratios. Muniraju & Ganesh (2016) examined the awareness of stakeholders towards the implementation of IFRS in India. The authors also discuss about likely effect of IFRS implementation on different industry sectors. Overall, these studies are not designed very rigorously and lack empirical analysis.

Achalapati (2015) is a detailed study to identify the statistically significant differences between the Indian GAAP based on IFRS based financial statements of sample companies. The author used financial ratios to identify differences. The study is based on 10 companies that have voluntarily adopted IFRS reporting. The results of the study indicate that adoption of IFRS has led to significant increases in liquidity, profitability and valuation ratios.

IFRS Implementation in India

In India, attempts were made time to time for convergence of Indian GAAP with IFRS. One of the basic advantages of India is its Anglo-Saxon model of accounting in preference to the code law system. Indian accounting standards are formulated based on IFRS set of standards but there are various exclusions and a few important standards are not introduced. India took convergence root for implementation of IFRS in India. The adoption of IFRS-converged Indian Accounting Standards is now a reality after almost *a-decade*-long deliberations and a failed attempt in 2011. The quarter ending June 30, 2016 is the first quarter of Ind AS compliant financial statement reporting for companies fulfilling the prescribed conditions in the first phase.

The events that were important from the context of IFRS implementation in India are listed in Exhibit I chronologically.

Exhibit 1

Journey to IFRS

Year & Month	Event
2011, February	Converged Standards (Ind AS) formulated.
2010, January	Time line of implementation notified by the Central Government
2011, February	Postponement of adoption of Converged Standards.
2015, February	IFRS converged standards (Ind AS) are given legal recognition through notification of rules.
2016, January	Roadmap prescribed.
2016, March	Deferment of implementation of Ind. As 115 “Revenue from Construction Contract with Customers”

The roadmap of IFRS implementation as given below indicates that there was would be phased adoption and banking and non-banking finance companies (NBFC) were excluded in the first phase.

Phase I

Ind AS set of standards are mandatorily applicable to the following companies for periods beginning on or after **1 April 2016**, with comparatives for the period ending **31 March 2016** or thereafter:

- Companies whose equity and/or debt securities are listed or are in the process of listing on any stock exchange in India or outside India and having net worth of 500 crore INR or more excluding any banking company and Non-banking Financial Company(NBFC).
- Companies having net worth of 500 crore INR or more other than those covered above.
- Holding, subsidiary, joint venture or associate companies of companies covered above.

Phase II

Ind AS standards are made be mandatorily applicable to the following companies for periods beginning on or after **1 April 2017**, with comparatives for the period ending **31 March 2017** or thereafter:

- Companies whose equity and/or debt securities are listed or are in the process of being listed on any stock exchange in India or outside India and having net worth of less than rupees 500 Crore.
- Unlisted companies other than those covered in Phase I and Phase II whose net worth are more than 250 crore INR but less than 500 crore INR.
- Holding, subsidiary, joint venture or associate companies of above companies

For the purpose of determining applicability, net worth will be determined based on the standalone accounts of the company as on 31 March 2014 or the first audited period ending after that date. It is also clarified that Ind AS will apply to both consolidated and stand-alone financial statements of a company covered by the roadmap.

Sample & Methodology

The study is an early attempt to determine the nature of disclosure by the IFRS converged standards adopters who are required to prepare their accounts following Ind AS w.e.f.1.4.2016. The major objective of this study is to analyze disclosure practice relating to first time adoption of Ind AS by listed companies in India fulfilling prescribed threshold condition i.e., having net worth more than Rs. 500 crores. Due to time and resource constraints we have restricted ourselves to BSE 500 companies. Our choice is based on the fact that 500 companies comprising BSE 500 index represent 94% of total market capitalization of all listed companies. It is observed that 411 firms comprising BSE 500 index are having net worth amounting to Rs. 500 crores or more. From 411 companies meeting the threshold conditions, we choose 20 companies randomly through computer using "Rande Between" function. List of sample companies is given in Annexure 1. Our sample is broad based. Segment classification of sample companies is given in Table 1 below.

Table 1: Segment Classification of Sample Companies

Industry Segment	No. Of Companies			
	Private Sector Companies	PSUs	MNEs	Total
Auto Components	3		1	4
FMCGs	2		1	3
Logistics	-	1	-	1
Oil Exploration	-	1	1	2
Oil Marketing	-	2	-	2
Pharma	1	-	1	2
Power	-	1	-	1
Metal	2	1	-	3
Others	2	-	-	2
Total	**10**	**6**	**4**	**20**

Source: CMIE Prowess Database. Results Computed

In our sample, there are 6 PSUs and 4 MNEs. There are companies from different industry segments and no industry segment has more than 3 companies.

The quarter ended 30.6.2016 is the first quarter in which accounts are prepared by the prescribed companies following Ind AS. Accordingly, for the purpose of analysis we have considered interim results for the quarter ended 30th June 2016. Our analysis was made to find out nature of disclosure and diversity in disclosure among sample companies. We have also made analysis of impact on profit as compared to that of previous quarter. For such analysis we have used disclosure in the reconciliation of profit section as provided in the notes to results statement.

We have obtained interim financial results related data from the filing of the concerned companies with stock exchange. Scanned copy of such filings as available through the website of stock exchanges are downloaded and used for depth analysis. We have handpicked the required data through close scrutiny of quarterly results.

Disclosures in Interim Results

We have considered disclosures in the quarterly results for the quarter ended 30thJune,2016, being the first quarterly results where the companies need to make disclosure regarding transition to Ind AS from Indian GAAP for preparation of financial statements. We also considered disclosure in the annual report of the financial year preceding 1stApril,2016. We made content analysis to extract the disclosures by the sample companies and analyzed the disclosures to identify the exhaustiveness and level of transparency of such disclosures. Furthermore, it is attempted to analyze diversity of such disclosures among the sample companies. The preparation of interim results including disclosure by listed companies is now governed by the Securities and Exchange Board of India (Listing Obligations And Disclosure Requirements) Regulations, 2015 (w.e.f. 1.12.2015).The Securities and Exchange Board of India (SEBI) is the regulatory authority for preparation of interim results by listed companies in India.

All sample companies have given at least one note to explain the transition. Generally, there is only a mention about the transition but no details are given about nature of changes in major accounting policies. As per Ind AS 101, a company needs to give reconciliation of profit as per previous GAAP and that as par IFRS in respect of three periods viz., corresponding quarter, preceding quarter and last financial year audited. For interim results for the quarter ended 30.06.2016, preceding quarter is q/e 31.3.2016, corresponding quarter is q/e 30.06.2015 and last audited financial is year ended 31.03.2016. However, SEBI vide its Circular No. CIR/CFD/FAC/62/2016 dt. July 05, 2016 has given exemption regarding providing reconciliation of profit for preceding quarter and previous financial year. Our analysis reveals that sample companies are not adopted uniform approach for availing of this particular exemption. Out of 20 sample companies 8 companies have provided reconciliation for all the three period viz., Quarter ended 30.6.2015, Quarter ended 31.3.2016 and year ended 31.3.2016. All other companies have provided reconciliation of profit for the quarter ended 30.6.2015 only. One sample company has provided reconciliation of profit for all the preceding four quarters and for the preceding year.

Disclosure regarding transition is generally made through one note and reconciliation is provided in another note in the statement. The areas of diversities are as under:

- Sample companies have not provided details of changes in accounting policies uniformly. 4 sample companies provided some explanatory notes about changes in accounting policies due to transition and explained the effects on Ind AS related profit of the corresponding quarter.
- Two sample companies have provided clarificatory notes about not providing reconciliation of profit for preceding year and preceding quarter. Others are silent about this issue.
- Two sample companies have provided reconciliation of equity. Since, equity capital & reserves are disclosed in the interim results, such reconciliation is helpful. If no change in equity happens due to transition that may also require disclosure.
- Two sample companies have provided reconciliation of profit upto net profit only instead of that upto comprehensive Income. This type of disclosure is not in conformity with the requirement of the relevant accounting standard.
- In respect of 5 sample companies, auditors have given a disclaimer in the limited review report that related figures of corresponding quarter and preceding year have not been checked by the auditor. In few cases, the company also given a note explaining that restated figures are prepared by the management and those are not subjected to limited review.
- A few sample companies have not mentioned the transition date i.e., 1.4.2015.

Effects of Ind AS Adoption on Financial Performance

IFRS set of standards and Ind AS set of standards are not same since there are many carve outs. Carve outs are deviations and those are generally perceived as non-desirable, since they dilute the key purpose of converging with IFRS (i.e., to have a common set of accounting standards across countries, provide seamless access to international capital. Nevertheless, there are major differences between erstwhile Indian GAAP and Ind AS set of standards. Obviously, transition to Ind AS requires change in measurement and disclosure in many areas. In the transition year, a company is required to provide reconciliation of profit and comprehensive income as restated by applying IFRS set of standards with those presented by applying erstwhile GAAP the previous year. This requirement applies to reporting of interim results also.

As mentioned elsewhere in this paper, all sample companies have provided reconciliation of profit of corresponding quarter of the previous year. Accordingly, an analysis is made about effect on profit due to transition. This analysis is informative in the sense that, it helps investors and stakeholders to assess the likely effect of transition on reported profit. All the sample companies have reported profit in the quarter under consideration. There are 13 cases of increase in profit and in 7 other cases adoption of converged IFRS standards has led to decrease in profit. Magnitude of change varies among sample companies (Table 2).Out of 13 cases of increase in profit due to transition, in 9 cases magnitude is nominal being less than 2%. Only in one case it is more than 30%. Among decrease in profit cases, magnitude of change is higher, as there are 3 cases of 10% to 30% change and 2 cases of 2% to 5% change.

Table 2: Change in Profit Due to Ind AS Adoption

Magnitude of Change	Increase	Decrease	Total
0 to 1%	4	1	5
1% to 2%	4	1	5
2% to 5%	3	2	5
5% to 10%	-	-	-
10% to 20%	1	1	2
20% to 30%	-	2	2
More than 30%	1	-	1
Total	**13**	**7**	**20**

Source: Interim Results of Sample Companies. Results computed

Table 3 gives descriptive statistics of changes in profit. Overall average of change is 10.22% . Average of positive change in profit is 22.06% with standard deviation (S.D) as high as 73.84%. Range is 0.17% to 267.80%. For negative change cases, average is (-) 13.30% and S.D. is 14.41%. Range of negative changes cases is (-) 0.55% to (-) 33.03%.

Table 3: Descriptive Statistics of Change in Profit (%)

Parameter	Only Increase Cases	Only Decrease Cases	All Cases
Mean	22.06	-13.30	10.22
Median	1.64	-4.15	0.56
S.D	73.84	14.41	61.72
Max	267.80	-0.55	267.80
Min	0.17	-33.03	-33.03
No. of firms	13	7	20

Source: Interim Results of Sample Companies. Results Computed

Apparently, average change appears to be high, but median value of 0.56% indicates that change in profit due to IFRS adoption is not very substantial in most of the cases. We have tried to find out the role of outliers for making the average high. It is identified that there is one outlier (with value 267.80%) by calculating and evaluating Z score. Table 4 gives descriptive statistics of change in profit without outlier. Overall average of changes is (-)3.90%. Thus, change in profit is less than 5% for all cases. Average increase is only 1.59% (closer to median value of 1.54%) when only increases in profit cases are considered.

Table 4: Descriptive Statistics of Change in Profit (%) without Outliers

Parameter	Only Increase Cases	Only Decrease Cases	All Cases
Mean	1.59	-13.30	-3.90
Median	1.54	-4.15	0.33
S.D	1.23	14.41	11.16
Max	4.05	-0.55	4.05
Min	0.17	-33.03	-33.03
No.of firms	13	7	20

Source: Interim Results of Sample Companies. Results Computed

We have carried a paired sample t-test to measure statistical significance of the difference in mean values of profit reported under erstwhile Indian GAAP and that restated under Ind AS. The result of analysis using SPSS 17 is presented in Table 5. The results indicate that p.value is not significant and it may be concluded that IFRS adoption does not significantly affect the net profit of sample companies. Our result is similar to that of Achalapati (2015) where author has found no significant difference in the case of net profit ratio.

Table 5: Paired Samples Test (Profit as per Indian GAAP and Ind AS)

N	Paired Differences				
	Mean	S.D.	Std. Error	t	p
20	(-) 9.37	43.98	9.8355	(-)0.953	0.353

Source: SPSS 17 Output

Conclusion

Overall, results indicate that in India, adoption of IFRS converged has some impact on profit. Indian GAAP standards are formulated substantially on the basis of IFRS. Besides, there are many crave outs in Ind AS. Hence, impact on profit of sample companies in most of the cases is not substantial. Investors and financial analyst should pay particular attention to situation of each company and make decision after identifying the causes of changes. Furthermore, unrealized gains and losses are not considered in profit calculation and reported as a part of comprehensive income. This issue also requires depth analysis. The impact on ratio level may show different picture as absolute change in profit is only considered in this study due to lack of data. The empirical results of our initial exploration raise some interesting questions and suggest the need for further research. First, our sample size is small and there is scope of making detailed research with larger sample size. Second, apart from effect on financial results, IFRS adoption has impact on balance sheet data and financial ratios. Such data being not available in the interim results, such an analysis could not be attempted. The results of the study indicate that there is wide diversity among the sample companies regarding disclosure on Ind AS adoption. A depth analysis of contents of disclosure reveals the companies are not forthcoming with detailed disclosure. It may be hoped that quality of disclosure will improve over time and the issues of diversity will be addressed over time through learning process and regulatory interventions.

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Annexure 1

List of Sample Companies

- Balkrishna Ltd.
- Bharat Forge Ltd.
- Cadila Healthcare Ltd
- Colgate Palmolive (India) Ltd.
- Container Corporation of India Ltd.
- Cummins India Ltd.
- Dabur India Ltd.
- Emami Ltd.
- Glaxosmithkline Pharmaceuticals Ltd.
- Hindustan Petroleum Corporation Ltd.
- Hindustan Zinc Ltd.
- Indian Oil Corporation Ltd.
- JSW Steel Ltd.
- Motherson Sumi Systems Ltd.
- NHPC Ltd.
- Oil India Ltd.
- Piramal Enterprises Ltd.
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- United Breweries Ltd.
- Vedanta Ltd.

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UNVEIL THE SCOPE OF ADOPTION OF COMPUTER ASSISTED AUDIT TOOLS AND TECHNIQUES (CAATTs)

Neelam Yadav*
Dr. Shurveer S. Bhanawat**

ABSTRACT

Now a days, Computer Assisted Audit Tools and Techniques (CAATTs) becomes a most popular audit tool for audit firm. It is being used to assist audit firms in order to efficient and effective external and internal audit work. It comes in operation with bundles of advantages to the audit firm. The objective of the study is to unveil the scope/area and determinant factors for the adoption of computer-assisted auditing tools and techniques. To achieve this objective data collected through questionnaire survey method from various 80 audit experts. For data analysis, descriptive statistics, ANOVA (Analysis of Variance) test has been administered. For testing of opinion survey data reliability, Cronbach's Alpha reliability test has been used. The results concluded that all scope/area where Computer Assisted Audit Tools and Techniques can be used in the audit process is independent and having an individual independent significant impact. Results also found that there is a significant difference among various determinant factors for the adoption of Computer Assisted Audit Tools and Techniques. It means each and every determinant factor having not the same significance level. The factors identified through survey analysis are not equally significant. On the basis of mean score, results found that most important determinant factors for the adoption of Computer Assisted Audit Tools and Techniques i.e. Lack of training on how to use IT for work, Staff's interest to learn how to use CAATTs, Lack of skill on how to use it, Cost of acquisition, The attitude of staffs towards CAATTs, Low awareness about CAATTs and Size of the audit client. Result of factor analysis shows that 30 scopes are reduced in 5 factors i.e. System audit, IT Communication System, Computational work, testing of Accounts and Audit Planning.

KEYWORDS: *CAATTs, Determinant Factors of CAATTs, Computerized Environment.*

Introduction

The modern computerized environment, in which each audited entity carries on business, creates new opportunities but also new risks, additional rules for security, thus permanently influencing the work of auditors. Increasing the complexity of accounting systems ERP (Enterprise Resource Planning) and the large volume of transactions currently underway have led to the ever-increasing replacement of classical, "manual" audit techniques, with modern computer-aided techniques, known by the name of CAATTs (*Computer Assisted Audit Tools and Techniques*).

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Computer Assisted Audit Tools and Techniques are becoming more popular throughout our profession. CAATTs is commonly used by auditors to extract and analyze data and perform application control tests. Adoption of CAATTs in audit firm comes with bundles of advantages. Now more than ever before, these tools are being used throughout the industry to assist internal auditors in their search for irregularities in data files, to help internal accounting departments with more detailed analysis and to support the forensic accountant with extrapolating large amounts of data for further analysis and fraud detection. Audit process which was previously conducted manually are now being aided through the use of software. Computer technology gives auditors a new set of techniques for examining the automated business environment. CAATTs hold the promise of enhanced audit effectiveness and efficiency **(Kotb & Roberts, 2011)[1].**Computer Assisted Audit Tools and Techniques are used in various areas in any business, for checking and testing data accuracy in the audit process.

Significance of the Study

If increasing the efficiency and effectiveness of auditors in the use of audit software for audit process could be enhanced if determinant factors for this are identified. Furthermore, studies of this type could help software developers on how audit software could be improved to better suit for auditing process if the cause for the inefficiency and avoidance of using the audit software determinant factors are identified. Also, this type of study help in identifying important scope/areas in which currently Computer Assisted Auditing Tools and Techniques used in the Audit process.

Review of Literature

In order to better understand CAATTs and why such technology is being used, an intensive review of the literature has been made. The review of literature is divided into three sections viz.,

- Previous CAATTs Research
- Role of CAATTs in the Audit process
- Factors influencing auditor's use of CAATTs

- **Previous CAATTs Research**

(Ernest, 2015)[2] provide detailed information about the concept of auditing to its relevance in a computerized accounting system. Also give a brief explanation on the terms computer, auditing, and computerized accounting system and analyzed the procedure for auditing a computerized accounting system. Computerized accounting offers several more benefits than manual accounting, the function of manual accounting will never go away completely. Examining auditor use of CAATTs is important because CAATTs hold out the promise of improving audit efficiency and effectiveness. **(Bierstaker, *et al*., 2013)[3].** Adoption of CAATTs in audit firm comes with bundles of advantages but the expenses of adoption can only be adopted by large companies. **(Zainol, *et al*., 2017)[4].**

- **Role of CAATTs in Audit Process**

Adoption of CAATTs in audit process is very crucial in the current information technology environment. In their study **(Zuca & Ţînţa, 2018)[5]** his explore CAATTs contribution in Business Intelligence Instruments in Financial Audit. Most financial auditors use only the tools provided by the computer to perform the financial audit. When using computer-assisted auditing techniques, the auditor finds that his work is improved and much more efficient because has many advantages over the traditional system of documentary and financial statement verification. In another study conducted through **(Olasanmi, 2013)[6]** explore the role of CAATTs in fraud detection in a firm and also studied the impact of CAATTs in the performance of a firm. Result found that CAATTs have played a major role in fraud detection. CAATTs can also help to improve the auditors' performance. Result also concluded that

CAATTs can help in the transparency of financial reports within organizations. In the current computerized environment uses of CAATTs for audit process in any organization is very important for increasing effectiveness and efficiency of a company. In this context **(Pedrosa & Costa, 2014)**[7] studied the challenges of CAs on adoption of CAATTs and current uses of CAATTs in their audit work. Studies are descriptive in nature. Result found that "Data Extraction and Analytics" and "Sampling" tools are the most common Information Technologies on Auditing work. Computer Assisted Techniques related to data mining are still not expressive in this reference group or are only utilized by a small group of experts, mainly at big companies. Result also shows new Trends of CAATTs for Chartered Accountant i.e. Big Data Analysis, Cloud Analytics, Security and Privacy Tools and BYOD[i].

- **Factors Influencing Auditor's Use of CAATTs**

To achieve rapid advances in client technology, audit standards urge auditors to use computer-assisted audit tools and techniques (CAATTs). Previous research suggests CAATTs adoption was very low. **(Bierstaker, *et al.,* 2013)**[3]. **(Konthong, *et al.*)**[8], **(Mansour , 2016)**[9], **(Shamsuddin, *et al.,* 2015)**[10], **(Bierstaker, *et al.*, 2013)**[3]all have applied Unified Theory of Acceptance and Use of Technology (UTAUT)[ii] model for identifying factors influencing auditors adoption of CAATTs. **(Mansour , 2016)**[9] in UTAUT model found that performance expectancy and firms facilitating conditions are more influencing factors and **(Bierstaker, *et al.*, 2013)**[3], **(Mansour , 2016)**[9]**,**both studies found that effort expectancy and social influence factors do not play a vital role in the adoption of CAATTs through UTAUT model. But on the other hand **(Shamsuddin, *et al.*, 2015)**[10]explored in their study that effort expectancy is the most influencing factor that affects the usage level of CAATTs by internal auditors compared to other factors i.e. performance expectancy, social influence and facilitating condition.**(Zainol, *et al.*, 2017)**[4]**. (Ebimobowei, *et al.*, 2013)**[11] have applied UTAUT model for identifying the factors on the adoption of CAATTs. In this study, they found that in all UTAUT models four factors i.e. performance expectancy, social influence, effort expectancy and facilitating condition are positively associated with the usage of CAATTs by accounting firms. **(Mahzan & Lymer, 2014)**[12]also studied factors underlying successful CAATTs adoptions would be helpful for the development of these technologies in internal audit functions. They applied the UTAUT model. This study found performance expectancy, facilitating conditions important factors influencing successful adoptions of GAS[iii]. This study also supported that social influence and effort expectancy factors are not found to be significant in the adoption of CAATTs. Authors applied models for factors determination but **(Janvrin, *et al.*, 2009)**[13] studied the extent to which computer-related audit procedures are used and whether two factors, control risk assessment, and audit firm size, influence computer-related audit procedures . Results indicated that computer-related audit procedures are generally used when obtaining an understanding of the client system and business processes and testing computer controls. Results also suggest that client IT complexity influences the nature of audit testing, and gives standard setters insights into how auditors adjust audit programs in response to control risk assessments.

Some authors applied other models other than UTAUT model for effectivedeterminant factorsof CAATTs. In this context **(Shihab, *et al.,* 2017)**[14]has applied TAM[iv] framework model to understanding the antecedents of CAATT adoption by external auditors in public accounting firms. Results provided empirical evidence that CAATT adoption was directly influenced by behavioural intention, perceived usefulness and perceived ease of use. Finally, perceived ease of use was influenced by the technological complexity and computer self-efficacy.

Some authors also identified factors of CAATTs using another model like TOE[v] model. **(Rosli, *et al.*, 2016)**[15]**, (Awa & Ojiabo, 2016)**[16] all have used TOE model. Our survey indicates that the role played by professional body support is important to increase its adoption. ICT infrastructures, technical know-how, perceived compatibility, perceived values, security, and firm's size were found statistically significant adoption determinants. Although the scope of business operations, trading partners' readiness, demographic composition, subjective norms, external supports, and competitive pressures were equally critical their negative coefficients suggest that they pose less of an obstacle to adopters than to non-adopters. Another study **(Rosli, *et al.*, 2012)**[17]have applied I-TOEmodel. This model focused on both organization and individual factors. It integrates both Unified Theory of Acceptance and Use of Technology 2 and Technology-Organization-Environment framework. I-TOE provides a comprehensive model that helps audit firms and regulatory bodies to develop strategies and policies to increase CAATTs adoption.

All above studies, applied ICT adoption model for identifying effective factors of CAATTs but **(Ahmi, *et al*., 2017**)[18] studied other external and internal factors. The objective of this study is toexamine the implementation of CAATTs by internal auditors in the public sector. For the study interviews made from 12 internal auditors head. Result found that the implementation of CAATTs by internal auditors in public sector is still low due to lack of expert, high implementation and maintenance cost, limited access of auditor's data, and most of them prefer to conduct the audit manually. The results implied that training for future auditors in CAATTs to ensure the successful implementation is important. For the successful adoption of CAATTs, the head of internal audit must have the awareness about the importance of CAATTs as well as enforcement of its implementation.

Using word cloud software, the most frequent words occurred in thereview of literature have recognized in order to check the relevant review of these objectives is undertaken. By using this software, the following diagram is drawn.

Objectives

- To unveil the scope of Computer Assisted Audit Tools and Techniques (CAATTs).
- To explore determinant factors for adoption of Computer Assisted Audit Tools and Techniques (CAATTs).

Hypotheses

H_{01}: There is no specific area in which Computer Assisted Audit Tools and Techniques (CAATTs) can be used. The different areas identified through survey analysis are equally important and Computer Assisted Audit Tools and Techniques (CAATTs) can be applied in all the identified areas.

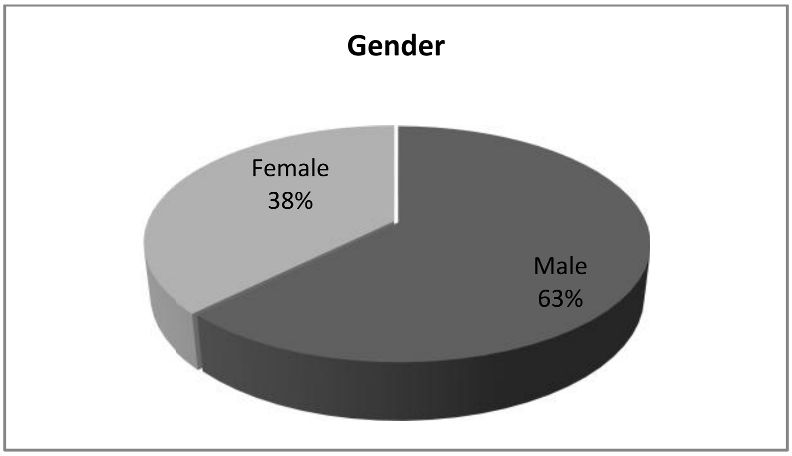
H_{02}: There is no significant difference among various determinant factors for adoption of Computer Assisted Audit Tools and Techniques (CAATTs). It means each and every determinant factor having the same level of significance to adopt CAATTs.

Sample Design/ Techniques of Data Analysis

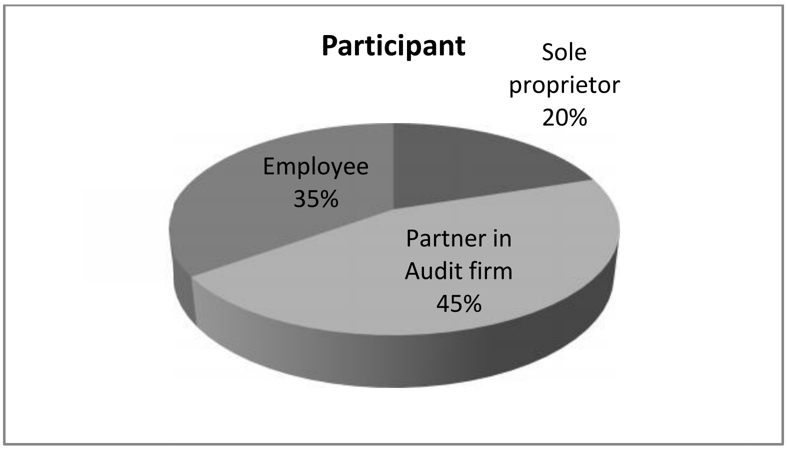
In order to examine the scope of Computer Assisted Audit Tools Techniques and determinant factors for adoption of Computer Assisted Audit Tools Techniques, the opinion of respondents has been obtained from the questionnaire survey method. Responses have obtained on the basis of five points Likert measurement scale, from 80 respondents, its belonging to various audit positions i.e. Partner, Senior Auditor, Consultant, Senior Manager, Junior Auditor, Junior Manager, and Accounting Technician. For data analysis, Descriptive Statistics, ANOVA have been administered. In order to check consistency regarding the respondent's opinion, the Coefficient of Variation (C.V.) has been administered. For testing of opinion survey data reliability, Cronbach's Alpha reliability test has been used.For testing any significant difference exist in various scope/area of computer-assisted auditing tools and techniques and any significant difference among various determinants factors for computer-assisted auditing tools and techniques, Analysis of Variance (ANOVA) is applied. In order to reduce variables with minimum loss of information, factor analysis technique have applied. Data has been analyzed using MS Excel and SPSS software.

Table 1: Respondent's Demographic Profile

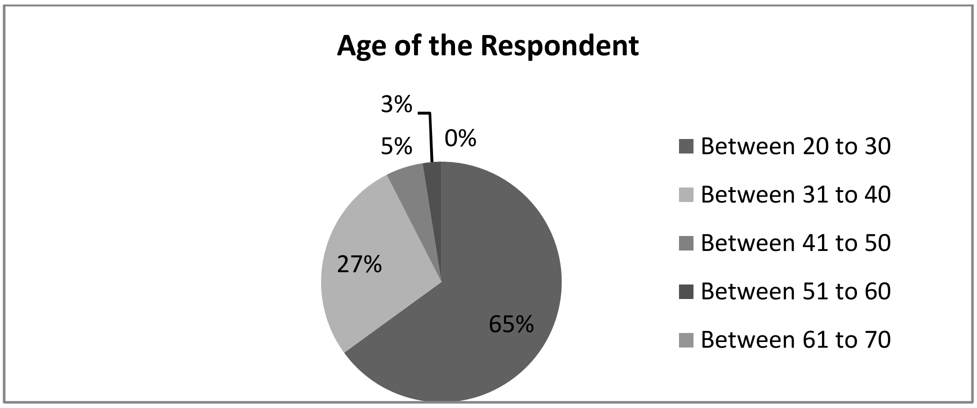
Gender Wise



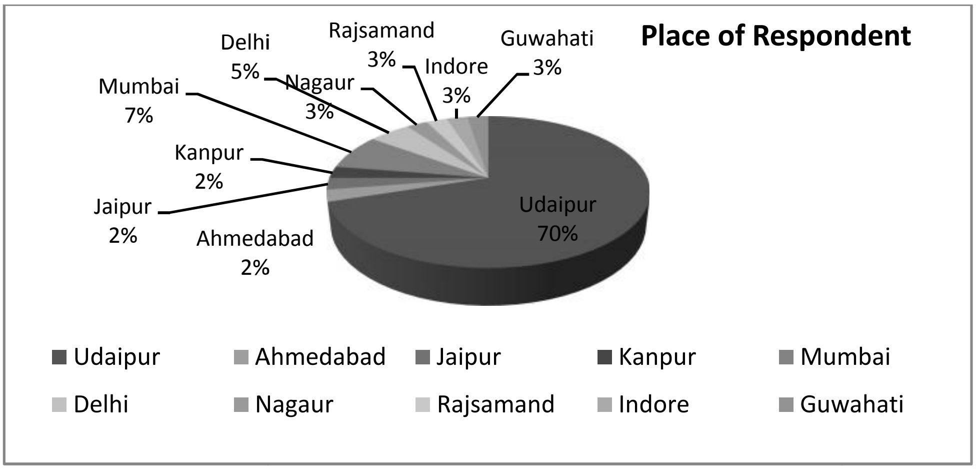
Participant Wise



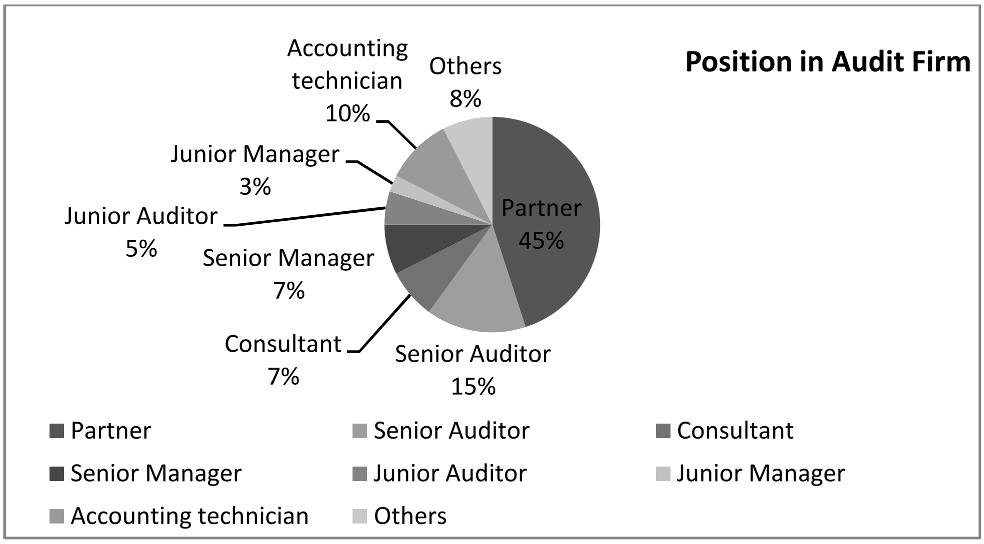
Age Wise



Place Wise



Position in the Audit Firm



Analysis and Discussion

- **Scope/Areas of Computer Assisted Audit Tools and Techniques**

List of scope/areas where CAATTs used in audit process derived from a review of literature have been examined on the basis of five-point Likert measurement scale. The score have been summarized in the following table no. 2. The data have been analyzed through Mean score and rank has been assigned on the basis of mean.

Table 2: Scope/Area where CAATTs Used Statistical Measurement

S. No.	Scope	Mean Value	Rank	C. V.
1.	Depreciation calculations	3.77	1	37.92
2.	Tax calculations	3.7	2	39.03
3.	E-Mail	3.56	3	43.49
4.	Electronic Spreadsheet	3.5	4	44.07
5.	Interest expense/income computation	3.45	5	46.09
6.	Financial Analysis	3.35	6	42.77
7.	Investment calculations	3.22	7	51.02
8.	Pension computation	3.15	8	52.75
9.	Word processing	3.1	9	51.73
10.	Communication with other members of the audit team	2.97	10	51.01
11.	Sample selection and analyzingwork	2.95	11	51.13
12.	Communication with clients	2.95	11	56.54
13.	Data extraction and analysis	2.92	12	53.51
14.	Audit report	2.92	12	52.39
15.	Make lists	2.87	13	52.61
16.	Test of inventory	2.85	14	47.07
17.	Risk analysis	2.85	14	53.86
18.	Data transport	2.82	15	54.54
19.	Automated Audit working paper	2.8	16	54.02
20.	Databases	2.78	17	56.70
21.	Test of account payable	2.75	18	52.23
22.	Test of account receivables	2.72	19	54.76
23.	Statistical analysis	2.68	20	63.92
24.	Audit planning	2.65	21	46.93
25.	Graphics	2.62	22	60.42
26.	Audit memos	2.52	23	58.42
27.	Planning work	2.47	24	66.18
28.	Parallel Simulation in audit process	2.45	25	60.88
29.	Continuous auditing / Embedded Audit Module	2.37	26	64.04
30.	Test data generator	2.32	27	65.20

Source: Own Calculation on Ms-Excel 2013

In the above table 2 presents various scope/ area where Computer Assisted Audit Tools and Techniques are used. In order to get the opinion of respondents regarding the preference of various scope, opinion has been collected through questionnaire. Out of 30 scope/area, respondents believe that currently computer-assisted auditing tools and techniques are predominantly used in depreciation calculations. It is evident by highest mean score i.e. 3.775. Respondents believe that the second most predominantly used scope/area by computer-assisted audit tools and technique is tax calculations. It is evident by second highest mean score i.e. 3.7. The scope that ranked third by the respondents is E-Mail. It is evident by third highest mean score i.e. 3.56. Respondent's opinion comes that fourth scope/area electronic spreadsheet where the Computer Assisted Auditing tools are mostly used. It is evident by fourth highest mean score i.e. 3.5. Respondents believe the fifth scope/area where computer-assisted audit tools are used is Interest expense/income computation. It is evident by fifth highest mean score i.e. 3.45. The result of above table shows that top 5 scopes/area where currently computer-assisted auditing tools and techniques are predominantly used but on the other hand out of 30 scopes/area, results also identified 5 scopes/area where computer-assisted auditing tools and techniques are rarely used. Respondents believe that computer-assisted audit tools and techniques are rarely used in various areas viz., test data generator, Continuous auditing / Embedded Audit Module, Parallel Simulation in the audit process and audit memos. It is evident by its lowest mean score. Above table shows that there is no consistency regarding respondents opinion about the scope/ area, where Computer-assisted auditing tools and techniques are used, It is evident by Coefficient of Variation (C.V.).

The reliability test of data collected through an opinion survey is ensured by using Cronbach's Alpha. The Alpha of Cronbach's is derived at 0.972 that it is much higher than the threshold limit of 0.70. It indicates that data are fully reliable for statistical analysis.

The above analysis and discussion revel a wide range of scope where CAATTs used in the audit process. The significance of each scope has been identified by calculating the mean score of Likert Scale data of scope of CAATTs. Now it has to check whether there is any significant difference is available among different scope/area of CAATTs or not. For this purpose a hypothesis has been developed as "There is no specific area in which CAATTs can be used. The different areas identified through survey analysis are equally important and Computer Assisted Audit Tools and Techniques (CAATTs) can be applied in all the identified areas." In order to check this hypothesis, ANOVA Technique has been used. The statistical outputs of ANOVA have been summarized in the following table:

Table 3: ANOVA Table

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	343.0871	29	11.83059	5.047968	5.41E-17	1.472296
Within Groups	5554.413	2370	2.343634			
Total	5897.5	2399				

Source: Own Calculation on Ms-Excel 2013

It is observed from the above table no. 3 that the calculated F value (5.047968) is very high than the tabulated value (1.472296) at 5% significance level and P-value is less than 0.05. Hence, the null hypothesis ($H_{01)}$ is rejected. It indicates that all specific area in which CAATTs can be used are independent and having an individual independent significant impact. Each and every scope of adoption of CAATTs has owned its merits and demerits and all are equally good, it's revealed through our statistical analysis.

Factor Analysis

Factor analysis is a technique that used to reduce larger data set into smaller set of new factors with minimum loss of information. In order to construct the new factors of scope of CAATTs the factor analysis technique has been used. For Factor analysis, there should be sufficient correlation between variables to produce representative factors. To ensure that the present data matrix has significant correlation between variables and to check the appropriateness of factor analysis, two approaches have been followed i.e. KMO and Bartlett's test of sampling adequacy Sphericity. KMO is measure of sampling adequacy and the Bartlett's test of sampling adequacy is a statistical test for the presence of correlations among the variables. The following table the results of KMO and Bartlett's test:

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.748164
Bartlett's Test of Sphericity	Approx. Chi-Square	3494.865
	df	435
	Sig.	0

Measure of sampling adequacy values must exceed .50 and as per the above table KMO value is 0.748 which indicates appropriateness of factor analysis for the study. Here Bartlett's Test of Sphericity significant value is 0 which is less than .05 (sig. < .05), indicates that sufficient correlation exist between variables.

Criterion for Selection of Factors

For the factor analysis, Principal Component method is applied. The selection criteria for the factor are based on eigen values. Factors having eigen value more than 1were chosen. The factor loading is important in interpreting the factor matrix. Loading 0.50 or greater are considered for factor analysis. On the basis of this criteria five factors are selected namely $F_{1,}$ F_2, F_3, F_4 and $F_{5.}$30 Variables of scope for adoption of CAATTs are reduced in 5 factors through factor analysis.

Factor - I System Audit

After introducing SPSS, first factor was named as a system audit. All this variables are related to system audit requirements. The below table showsall variables which are included in system audit with their loadings.

Variables	Loading
Data Extraction and analysis	0.830
Continuous Auditing / Embedded Audit Module	0.795
Planning	0.793
Test data generator	0.792
Parallel Simulation	0.764
Sample selection and analysing work	0.718
Statistical Analysis	0.704
Risk Analysis	0.598
Audit Memos	0.516
Automated Audit Working Paper	0.515

Factor – II IT Communication System

Second important scope (factor) is IT Communication System, which includes general computer audit work. The below table shows all the variables which are related to IT Communication System with their factor loadings.

Variables	Loading
Word Processing	0.863
Communication with other audit team members	0.787
Electronic Spreadsheet	0.785
Email	0.762
Graphics	0.719
Communication with Clients	0.717
Make Lists	0.664
Financial Analysis	0.632
Audit Report	0.553

Factor – III Computational work

Third number of scope (factor) is computational work which includes calculation work of financial accounts. The below table shows all the variables which are related to Computational work with their factor loadings.

Variables	Loading
Interest expense/income Computation	0.854
Investment Calculation	0.771
Tax calculations	0.692
Depreciation calculation	0.676
Pension calculation	0.645
Database	0.506

Factor – IV Testing of Accounts

Factor fourth is named as a testing of accounts. Its covers testing work of accounts. The below table shows name of variables with their factor loading.

Variables	Loading
Test of Inventory	0.862
Test of account payable	0.844
Test of accounts receivables	0.809

Factor – V Audit planning

Fifth factor is audit planning. It includes only one variable i.e. audit planning.

Variables	Loading
Audit planning	0.809

The below table shows name of the factors with their percentage of variance explained:

Name of New Factors with Percentage of Variance		
Factor	**Name**	**Percentage of Variance**
1	System audit	23.248
2	Information system	22.545
3	Computational work	16.606
4	Testing of Accounts	13.306
5	Audit Planning	4.562
	Total Variance	80.267

Source: SPSS output

- **Determinant Factors for Adoption of Computer Assisted Audit Tools and Techniques(CAATTs)**

In order to identify responsible determinant factors of effective utilization of CAATTs, Mean and ANOVA have been calculated. Table 4 below gives a list of the determinant factors for adoption of CAATTs. All these factors are arranged on the basis of a mean value obtained and given rank accordingly.

Table 4: Determinant Factors of CAATTs

S. No.	Factors	Average	Rank	C. V.
1.	Lack of training on how to use IT for work	3.85	1	29.54
2.	Staff's interest to learn how to use CAATTs	3.77	2	26.31
3.	Lack of skill on how to use it	3.77	2	29.49
4.	Cost of acquisition	3.75	3	23.04
5.	Attitude of staffs towards CAATTs	3.7	4	22.09
6.	Low awareness	3.7	4	31.12
7.	Size of audit client	3.6	5	24.84
8.	Usefulness of the software	3.5	6	28.02
9.	Personal attitude of the user	3.5	6	28.02
10.	Availability of in-house or supplier training	3.4	7	30.90
11.	Availability of support/ guidance from the supplier	3.27	8	29.93
12.	Client resistance or cooperativeness	3.15	9	33.16

Source: Own Calculation on Ms-Excel 2013

In the above table no. 4, presents various determinant factors for adoption of Computer Assisted Auditing Tools and Techniques in the audit process. Out of 12 factors, respondents believe that lack of training on how to use information Technology for audit process is a most important determinant factor on the adoption of CAATTs. It is evident by highest mean score i.e. 3.85. Second most influencing factors of adoption of CAATTs that's two factors, Staff's interest to learn on how to use CAATTs and Lack of skill on how to use it. It is evident by second highest mean score i.e. 3.775. The factor that ranked third by the respondents is the cost of acquisition. It is evident by third highest mean score i.e. 3.75. Respondent's opinion laid out the fourth most important determinant factors that are Attitude of staffs towards CAATTs and Low awareness about CAATTs. It is evident by fourth highest mean score i.e. 3.7. Respondent believes that the Size of the audit client is a fifth determinant factor of adoption of CAATTs. It is evident by fifth highest mean score i.e. 3.6. Above table shows that there is no consistency regarding respondent's opinion and about determinant factors of Computer-assisted auditing tools and techniques. It is evident by Coefficient of Variation (C.V.).

On the basis of mean score the following most important determinant factors on the adoption of computer-assisted auditing tools in the audit process are identified:

- Lack of training on how to use IT for work.
- Staff's interest to learn how to use CAATTs.
- Lack of skill on how to use it.
- Cost of acquisition.
- The attitude of staffs towards CAATTs.
- Low awareness about CAATTs.
- Size of the audit client.

The reliability test of data collected through an opinion survey is ensured by using Cronbach's Alpha. The Alpha of Cronbach's is derived at .0905 that is much higher than the threshold limit of 0.70. It indicates data are fully reliable for statistical analysis.

The above analysis revealsdeterminant factors of effective utilization of CAATTs. The significance of each factor has been identified by calculating the mean score of Likert Scale determinant factors data. Now it has to be checked whether there is any significant difference is available among different determinant factors of adoption of CAATTs or not. For this purpose, a hypothesis has been developed as "that there is no significant differences among various determinant factors for adoption of Computer Assisted Audit Tools and Techniques (CAATTs). It means each and every determinant factors having the same level of significance to adopt CAATTs".

In order to check this hypothesis, ANOVA technique has been used. The statistical output of the ANOVA has been summarized in the following table:

Table 5: ANOVA Table

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	42.4125	11	3.855682	3.810463	2.22E-05	1.798737
Within Groups	959.25	948	1.011867			
Total	1001.663	959				

Source: Own Calculation on Ms-Excel 2013

It is observed from the above table no. 5 that the calculated F value (3.810463) is very high than the tabulated value (1.798737) at 5% significance level and P-value is less than 0.05. Hence, the null hypothesis ($H_{02)}$ is rejected. It indicates that there is a significant difference among various determinant factors of CAATTs. It means each and every determinant factor having not the same significance level. The factors identified through survey analysis are not equally significant. The result of ANOVA shows that factors are independent and are having an individual independent significant impact.

Concluding Remark

In the computerized era of this business environment, the adoption of Computer Assisted Auditing tools and techniques in the audit process is very essential. For effective utilization of computer-assisted audit tools and techniques, it is important to identify scopes/area where computer-assisted audit tools and techniques are used and determinant factors of adoption of computer-assisted audit tools and techniques. The objective of the present study is to unveil the scope and determinant factors of computer-assisted auditing tools and techniques. Results of the study show that the use of CAATTs in Audit process is very low. Results concluded that all specific area in which CAATTs can be used are independent and having an individual independent significant impact. Result also concludes that there is a significant difference among various determinant factors of CAATTs. It means each and every determinant factor does not the same significance level. Both null hypotheses have been rejected. This type of study also helps to identify the areas in which CAATTs are rarely used and what are the areas in which they are most predominately used and the reason for the same. It will help the software developers to design the future software accordingly. On the basis of factor analysis, 30 scopes are reduce in 5 factors i.e. System audit, IT Communication System, Computational work, testing of Accounts and Audit Planning. For achieving the objective of the study five scopes for using CAATTs were identified on the basis of mean score. The results of mean score basis are summarised below.

On basis of statistical analysis (mean score), top five scopes/area where predominantly computer-assisted auditing tools and techniques are used. These are:

- Depreciation Calculation
- Tax Calculations
- E-Mail
- Electronic Spreadsheet
- Interest expense/income computation

On basis of statistical analysis (mean score), following five scopes/area are identified where computer-assisted audit tools and techniques are rarely used.

- Test data generator
- Continuous auditing / Embedded Audit Module
- Parallel Simulation in the audit process
- Planning software
- Audit memos

On the basis of mean score the following most important determinant factors on the adoption of computer-assisted auditing tools in the audit process are identified:

- Lack of training on how to use IT for work.
- Staff's interest to learn how to use CAATTs.
- Lack of skill on how to use it.
- Cost of acquisition.
- The attitude of staffs towards CAATTs.
- Low awareness about CAATTs.
- Size of the audit client.

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Endnotes

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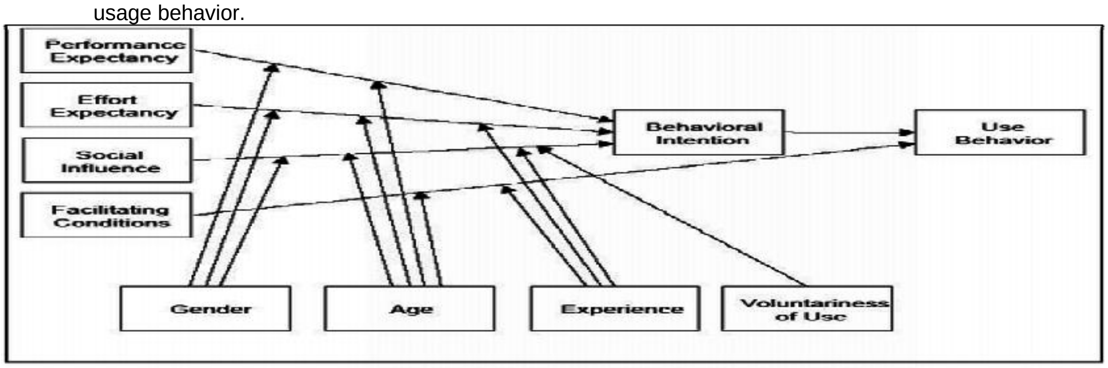
i BYOD, or *bring your own device*, is a phrase that has become widely adopted to refer to employees who bring their own computing devices – such as smartphones, laptops and tablets – to the workplace for use and connectivity on the secure corporate network.

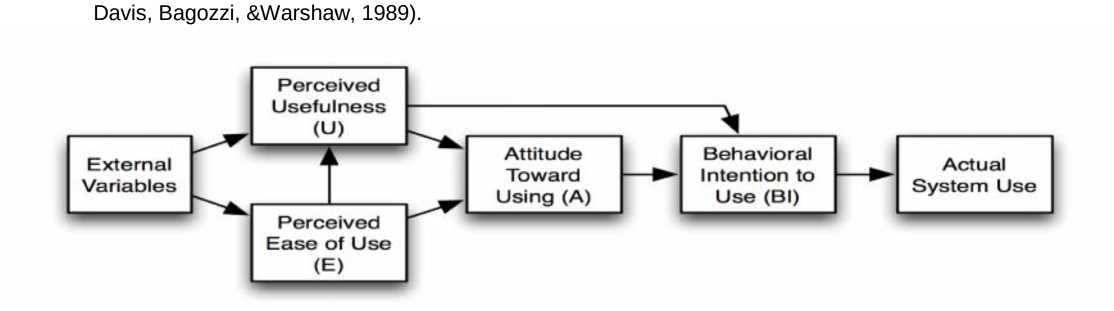
ii The unified theory of acceptance and use of technology (**UTAUT**) is a technology acceptance model formulated by Venkatesh and others (2003) in "User acceptance of information technology: Toward a unified view". The **UTAUT** aims to explain user intentions to use an information system and subsequent usage behavior.



Source:https://www.researchgate.net/figure/UTAUT-model-Venkatesh-et-al-2003-In-the-UTAUT-model-performance-expectance-is-driven_fig1_281321623

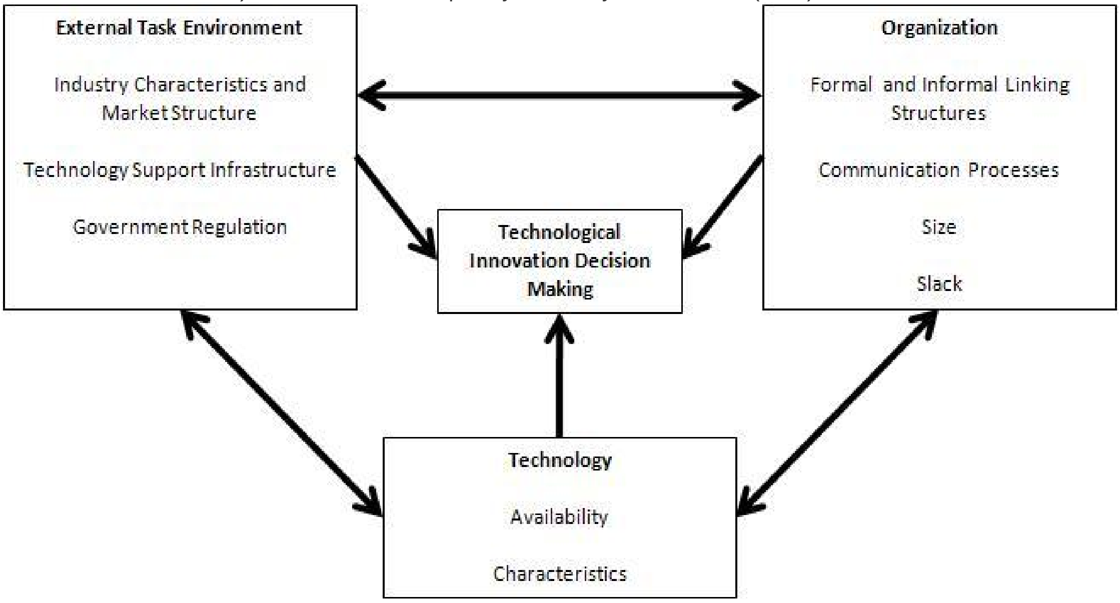
iii **Generalized audit software** (GAS) refers to software designed to read, process and write data with the help of functions performing specific audit routines and with self-made macros. It is a tool in applying Computer Assisted Audit Techniques (CAATs). Functions of generalized audit software include importing computerized data; thereafter other functions can be applied: the data can be e.g. browsed, sorted, summarized, stratified, analysed, taken samples from, and made calculations, conversions and other operations with. Two of the most popular software packages are Audit Command Language (ACL) and Interactive Data Extraction and Analysis.

iv The technology acceptance model (TAM)is an information system theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. Developed by (Davis, 1989; Davis, Bagozzi, &Warshaw, 1989).



Source:https://en.wikipedia.org/wiki/Technology_acceptance_model v **Technology-Organization-Environment Framework Model**.

The process by which a firm adopts and implements technological innovations is influenced by the technological context, the organizational context, and the environmental context (DePietro, Wiarda, & Fleischer, 1990).A **model** was developed by Tornatzky and Fleischer (1990).



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ROLE OF XBRL IN PROMOTING THE INTEGRATED REPORTING IN INDIAN SCENARIO

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ABSTRACT

Today all the business organizations working in the dynamic environment in which the stakeholders are having dynamic information need. So the information so communicated to stakeholders is not only related to the present scenario but it also related to past and future prospect of the business operation. To achieve this it is impossible with communicating only financial information in the annual reports but it also necessary to communicate non-financial information in a single report to aid stakeholders to act strategically. So around the world, Integrated Reporting (IR) is the trend of the day. So there is a need of having standardized mode of reporting that can be XBRL. So the present study is intended to analyze the importance of integrated reporting, role of XBRL in promoting integrated reporting and the challenges involved in promoting integrated reporting through XBRL. For this study collected the data through both primary and secondary sources and collected data is analyzed through one-sample t-test and concludes that at present integrated reporting is very much important to Indian scenario and XBRL plays a significant role in promoting integrated reporting.

KEYWORDS: *XBRL, Financial Information, Integrated Reporting, One-sample t-test.*

Introduction

Accounting is the language of the business as a language it has to communicate business and financial information to cater the need of all group of interested parties such as management, investors, employees, customers, regulatory authorities and the public at larger interest. To communicate business and financial information there is a necessity of a standardized mode which enables the firm to disclose entire accounting information of the business. In the traditional days business and financial information were being communicated through clay, paper, word format, PDF and HTML but these formats are highly suffered from an unique limitation as it is only readable by human but not by computers from this point traditional format of business and financial reporting system was not efficiently cater the information need of various stakeholders so it created the necessity of having the highly advanced efficient and modern format of business and financial reporting which removes the barriers and shortcomings of traditional reporting. By keeping this in mind in April 1998,

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Charles Hoffman[1] had developed XML based business and financial reporting language which is presently well known by Extensible Business Reporting Language (XBRL) to remove the shortcomings of the traditional business and financial reporting mechanism. Today it has become the open international standard for business and financial information reporting which is developed and managed by the international non-profit organization, XBRL International which consists of more than 600 organizational members across the globe[2]. XBRL International provides XBRL Taxonomy which is applicable to country-specific Accounting GAAP and IFRS as well. At present more than 60 countries implemented XBRL for business and financial reporting by the companies[3].

In India, XBRL emerged in 2007 when ICAI (Institute of Chartered Accountant of India) realized the importance of digital financial reporting to Indian scenario and MCA (Ministry of Corporate Affairs) was imposed reporting of business and financial information through XBRL in the year 2011 for certain class of companies[4]. Today top 500 BSE listed companies are reporting their business and financial information through XBRL in India. In India, companies are required to file various compliance reports to respective regulatory authorities in XBRL formats only. It shows the importance of XBRL in Indian scenario because of its efficient benefits such as easy reporting, interoperability among regulatory authorities, near zero error in filing, extendable, easy analysis, and re-usability without any re-keying and so on. But still, XBRL filing is not applicable to a certain group of industries such as Banking, Insurance, Power sector, non-banking financial companies, and housing financing companies[5].

The Working Mechanism of XBRL

XBRL has its own working mechanism with the help of two major documents such as:

- XBRL Taxonomy: it is a document and which works as the dictionary of financial elements and defines the relationship among the elements. Taxonomy is developed based on the regulatory requirement, Accounting GAAP applicable to a particular country. This helps the business to report the business and financial information as per the requirement of regulatory authorities and easy compliance check before the submission of the various documents required by the different regulatory authorities. This document is developed by the regulatory authority of the country. In India MCA is the sole authority to develop the XBRL taxonomy as per Ind-As with the help of ICAI.
- XBRL Instance Document: it is a document which is developed by the companies with actual information of their business and financial operations as per the standard taxonomy defined by the regulatory authority. With the help of instance documents company will generate financial statements, reports being submitted to various regulatory authorities. This document is in the form of XML format and which should be validated with the taxonomy validation tool to generate the business and financial reports of the organization.

This working mechanism of XBRL had created plenty of benefits to the regulatory authorities too. It minimized the lot of administrative work, removed the manual verification of submitted documents, inter-exchangeability of reports among various government authorities through the internet.

Integrated Reporting

Today all the business organizations working in the dynamic environment in which the stakeholders are having dynamic information need. So the information so communicated to stakeholders is not only related to the present scenario but it also related to past and future prospect of the business operation. To achieve this it is impossible with communicating only financial information in the annual reports but it also necessary to communicate non-financial information in a single report to aid stakeholders to act strategically. So around the world, Integrated Reporting (IR) is the trend of the day[6]. IR is the mechanism of reporting both financial and non-financial information in the single report of the business. IR is having three-dimensional reporting and analysis namely mandatory and voluntary disclosure, financial and non-financial disclosure and forward-looking and historical information disclosure, but all these three dimensions are not inter-related and which cannot be avoided to reporting in firm disclosures (Trucco, 2015)[7]. This clears that IR definitely supports the stakeholders by providing dynamic information to aid them in timely decision making in their own perspective. By keeping this in mind the regulatory authorities around the world are taking the initiative of mandating the IR to companies which are operating in their environment. Apart from this some of the countries have allowed companies to voluntarily reporting their business and financial information in an integrated manner like India. India's SEBI a regulator of the stock market in its circular of February 2017 allowed top 500 listed companies to follow IR voluntarily in their business and financial reporting process[8].

Evolution of Corporate Reporting Over the Period of Time

Corporate houses are the artificial citizen of the country in which it operates and it is equally responsible towards the environment like a natural citizen. It utilizes the resources from the society for the achievement of its goal and at the same time it has to accountable to its stakeholders by communicating information about its performance and the contribution towards society in which it operates for the socio-economical sustainable development so it is necessary to analyze how corporate reporting evolved over the period of time. During the 1960s the corporate reporting trend was started by communicating the performance of the business only with the help of financial statements I,e., Income statement, and Position statement. Due to the varying information need of stakeholders financial statement centric corporate reporting advanced during the 1980s by including Management discussions, Governance issues, Environmental reporting along with Financial statements this period witnessed the emergence of Integrated Reporting. Due to the dynamic nature of the business environment during 2000 corporate reporting is well advanced by including the concept of Sustainability Reporting (SR) and by 2020 Corporate reporting around the world will shift static reporting approach to dynamic Integrated Reporting approach[9].

Table 1: Stages of Evolution of Corporate Reporting Around the World

Stages of Evolution of Corporate Reporting	Focus on Information
The 1960s	Financial Statements – only financial performance related information
The 1980s	Financial Performance, Management Discussions, Governance, Environmental Reporting
2000	Financial Performance, Management Discussions, Governance, Sustainability Reporting
2020 (expected)	Integrated Reporting (Past, Present, Future)

Source: International Integrated Reporting Council[9]

Role of XBRL in Implementing Integrated Reporting

International Integrated Reporting Council was mentioned that there is a necessity of having the technological support for the efficient implementation of Integrated Reporting around the world[10]. To achieve these corporate houses can use XBRL as the technological support for successful implementation of Integrated Reporting. In addition to this XBRL international is also stated that it will support in developing the required taxonomy for integrated reporting implementation around the world. XBRL plays a vital role in successful implementation of Integrated Reporting due to the following opportunities and benefits:

- It helps in easy consumption integrated information with the help of XBRL taxonomies.
- It allows integrated information readable by both human and machines(i.e., computers)

- XBRL enables reported integrated information to be re-usable again and again without re-keying i.e., it avoids routine manual repetitive tasks.
- XBRL works with pre-coded integrated information templates that is taxonomy for integrated reporting which will works with greater accuracy with near zero defect i.e., 99.99966% level.
- XBRL also helps in preserving data structure and its context for the long period.
- This language is also helps in automatic verification of standard integrated reporting rules with actually reported information i.e., it allows easy compliance check.
- If the corporate houses situated in a particular environment are following XBRL for IR then it is very easy for comparison of information across the companies.
- Further it enables the firm to include additional company specific information with extendibility feature.

So the present paper is intended to analyse the role of XBRL in promoting integrated reporting in Indian scenario for this purpose paper is organized as literature review, research gap, statement of the problem, research questions, research objectives, hypotheses, methodology, results and discussions, conclusions, limitations and recommendations for further research.

Literature Review

Pistoni et al.,(2018)[11] conducted a study to assess the quality of integrated reports through a quality scoring model and integrated reporting scoring board by taking into consideration of 116 integrated reports. The study concludes that IR quality is low. Companies are following only IR framework but not disclose the sufficient information.

Makiwane and Padia, (2013)[12] analyzed the level of corporate governance disclosures specifically with respect to the extent to which non-financial information is disclosed in the annual reports. The study found that the companies are more disclosing non-financial information than financial information in annual reports as a part of integrative initiative.

Jensen and Berg, (2012)[13] opines that the countries with a high investor protection environment with disperse ownership nature of financial system and high market co-ordination tends to have integrated reporting.

Ioana and Adriana, (2013)[14] Identified three stages in the evolution of the integrated reporting namely emergence of non-financial reporting initiatives, sustainability era and contemporary integrated reports and concludes that one could consider the role of global reporting standards to encourage the production of high quality integrated reports.

Ana oluic and Mamic Sacer (2013)[15] analyzed the impact of information technology on accounting process and on accounting information system quality. They collected date through structured questionnaire from 400 large and medium size companies and other secondary sources. Collected data was analyzed through simple statistical tools such as averages, percentages etc., finally their study concluded that the information technology is significantly effects on the quality of financial reporting system by ensuring the accuracy, timeliness and reduced cost of production accounting information. They also suggested for the improvement of some areas such as implementation of suitable training to employees and to conduct continuous auditing of information to ensure the quality of accounting information.

Steve Yang etal., (2016)[16] examined the impact of XBRL on financial statement structural comparability during the post XBRL implementation period in US. For the purpose of data, the authors have adopted secondary sources by analyzing 27,971 annual reports from 10 industries for the period 2010-2014. Data collected was analyzed through content analysis, graph similarity measure, local outlier factor algorithm and Mann-Whitney U test were applied and they analyzed income statement, balance sheet and cash flow statement structure through XBRL SEC filings and found that there is significant improvement in structural comparability of financial statements and also witnessed that the XBRL filings benefits regulators in providing suggestions for continuous development of XBRL in USA.

Ernest and Harmon (2012)[17]. Have analyzed and predicted the role of auditors which could be expanded with the introduction of XBRL financial reporting by their conceptual study. They have found that the steps involved in creating XBRL financial statements create additional risks in financial statement disclosure. For this reason, they are in the opinion that auditors will be required to adjust their process and also master XBRL terminology, taxonomies and tools. Also suggests auditors to gain early and in depth knowledge of audit implications of XBRL which will give a strategic competitive advantage in the marketplace.

Research Gap

From the review of earlier studies it is found that the studies were mainly focused on quality of integrated reporting and on impact of XBRL reporting but no studies were individually conducted on the role of XBRL on promoting integrated reporting. So the present study is intended to analyse the role of XBRL in promoting integrated reporting in Indian scenario.

Statement of the Problem

Integrated reporting is the trend of the day in corporate reporting environment so there is a necessity of promoting integrated reporting in a unified manner for this purpose XBRL will become the greater platform for implementing integrated reporting by the companies in India. So it created the necessity of analysing the role of XBRL in promoting integrated reporting by taking the perception of various stakeholders of integrated information of the business.

Research Questions

Based on the statement of the problem study framed following research questions:

- Why integrated reporting is important?
- How XBRL promotes integrated reporting?
- What are the challenges to be faced in promoting integrated reporting through XBRL?

Research Objectives

Based on the research questions the study framed following research objectives:

- To analyse the importance of integrated reporting.
- To evaluate the perception of stakeholders on the role of XBRL in promoting integrated reporting.
- To examine the challenges involved in promoting integrated reporting through XBRL.

Hypotheses

Based on the research objectives following research hypotheses were framed:

H_0: Integrated reporting is not significantly important to Indian scenario.

H_0: XBRL is not helps in promoting integrated reporting system.

Methodology

The study involved through certain methodological issues such as it is descriptive and empirical in nature, data collected through both primary and secondary sources. Primary data is collected through structured questionnaire both off-line and online are used to get the perception of various stakeholders and secondary data is collected through articles, newspapers, websites, government reports etc., for the purpose study stakeholders includes Investors, Regulators, Academicians, auditors and financial analysts. The collected data is analysed with the inferential statistics by using one-sample t-test.

Sampling Method

For the purpose of study convenience sampling method is used. 50 questionnaires were distributed and 44 responses were received and which is indicated in the following table.

Table 2: Stakeholders Group for the Purpose of Study

Stakeholders Category	Number of Respondents	Number of Responses Received
Investors	15	13
Regulators	05	04
Academicians	15	15
Auditors and financial analysts	15	12
Total	**50**	**44**

Source: Author compilation

Results and Discussion

The results of perception of stakeholders is analysed as follows:

Table 3: Results One-Sample t-test for the Perception of Stakeholders on the Importance of Integrated Reporting (Test value – 3)

Importance of Integrated Reporting	N	Mean	Std. Deviation	t-value	Sig.(2-tailed)
IR is focuses on past, present and future prospect of the firm	44	4.1136	1.03914	7.109	.000
IR is a vehicle for creation of long-term value for business	44	4.0227	1.17114	5.793	.000
IR is helps in recognizing risks and opportunities in a short, medium and long-term	44	4.0682	.84627	8.373	.000
IR is more external oriented	44	3.8864	1.35055	4.353	.000
IR is a tool for strategically decisions to be made by various stakeholders	44	4.6136	.49254	21.731	.000
IR is multidimensional and covers both financial and non-financial information equally	44	4.3864	1.03914	8.850	.000
IR is helps in co-ordinating among planning and co-ordinating functions	44	4.3864	.61817	14.876	.000
IR helps in building confidence on the business performance	44	4.2273	.93668	8.691	.000
IR improves future performance of the business	44	4.1818	1.06253	7.378	.000
IR helps in providing sustainable information to the stakeholders	44	4.3864	.65471	14.046	.000

Source: SPSS Output

Table 3 shows that the results of one-sample t-test at the 5% significance level for the perception of stakeholders on the importance of integrated reporting in Indian scenario. The mean value of all the variables on importance of integrated reporting are showing above standard mean value that is 3. This clears that integrated reporting is vital for the companies because it is multidimensional. Further the p-value of all the variables showing less than 0.05 which means null hypothesis (H_0) is rejected that is integrated reporting is not significantly important to Indian scenario and alternative hypothesis (H_1) is accepted that is integrated reporting is significantly important to Indian scenario.

Table 4: Results One-Sample t-test on the Perception of Stakeholders on the Role of XBRL in Promoting Integrated Reporting

Role of XBRL in Promoting Integrated Reporting	N	Mean	Std. Deviation	t-value	Sig. (2-tailed)
XBRL improves the quality of business and financial reporting	44	4.0455	1.25669	5.518	.000
XBRL allows the companies for flexible reporting	44	4.2273	1.13841	7.151	.000
XBRL allows to report both financial and non-financial information	44	4.4773	.97620	10.038	.000
XBRL enables the companies to automatic verification of reported integrated information with required information by regulatory authorities	44	3.9773	1.32048	4.909	.000
XBRL taxonomies for IR helps the regulatory authorities to ensure uniformity in reporting	44	4.2045	.90424	8.836	.000
XBRL allows easy comparison of Integrated Information across the firms	44	4.2727	.97321	8.675	.000
XBRL allows to report both financial and non-financial information equally	44	4.0000	1.14119	5.813	.000
XBRL eliminates the clerical errors in integrated report preparation	44	4.6818	.47116	23.678	.000
XBRL helps in reducing the cost of preparation and publication of integrated reports	44	4.0682	1.20845	5.863	.000
XBRL helps in easy analysis of business and financial information	44	4.1364	1.30457	5.778	.000

Source: SPSS Output

Table 4 shows that the results of one-sample t-test at the 5% significance level for the perception of stakeholders on the role of XBRL in promoting integrated reporting. The mean value of all the variables on the role of XBRL in promoting integrated reporting are showing above standard mean value that is 3. This clears that XBRL plays vital role in promoting integrated reporting. Further the p-value of all the variables showing less than 0.05 which means null hypothesis (H_0) is rejected that is XBRL is not helps in promoting integrated reporting and alternative hypothesis (H_1) is accepted that is XBRL is helps in promoting integrated reporting.

Challenges Involved in Promoting Integrated Reporting through XBRL

By the analysis of secondary information study identified the following challenges involved in promoting integrated reporting through XBRL:

- To promote integrated reporting through XBRL it is very important to get common agreement among various professional organisations. But it is very difficult to achieve consensus among these organisations.
- To develop taxonomy for IR it is very difficult to harmonise various standards like IASB, GRI, CDP, and Sustainability Accounting Standards Board because the principles of these standards vary from each other.
- A big challenge to the software engineers to develop software tools which is capable of XBRL tagging integrated reporting.
- It is very difficult to develop tools for analysing data.
- Preparation of XBRL reporting guidance for integrated reports for prepares is another big challenge.
- Creating awareness and conducting educational programs for preparers and users about integrated report preparation and making them understanding its usefulness is a difficult task.

Findings

With reference to the objectives of study, following findings are presented:

- With respect to first objective by analysing the perception of the stakeholders study found that integrated reporting is significantly important to companies in Indian scenario because it is multidimensional and focuses on past, present and future prospective of the business performance and aid to the stakeholders in making timely strategic decisions.
- With respect to second objective by analysing the perception of the stakeholders study found that XBRL plays a significant role in promoting integrated reporting by the companies in Indian scenario because it is the dynamic mode of reporting and communicating both financial and non-financial information of the business as per the need of various stakeholders along with confirming business rules set by stakeholders, further it eliminates the pitfalls of conventional reporting format of reporting and finally it helps in harmonizing financial reporting in Indian scenario.
- With respect to last objective study identified significant challenges to be faced by regulatory authorities, business people and XBRL software developers in promoting integrated reporting system in India through XBRL.

Conclusion

Due to the dynamic changes in the business environment the stakeholders are also having dynamic information need for taking strategic decisions in their individual perspective on the companies matter so there is an oblivious need of providing integrated information to end-users. Further it is also important to maintain consistency and uniformity in communication of integrated information. To achieve this XBRL will play a vital role because of its fruitfulness in various perspectives. Finally study concludes that future of business and financial reporting only with the help of XBRL and which is one and only the tool for harmonizing integrated reporting by the companies not only at Indian scenario but also in global scenario.

Limitations

The present study is also suffers from some limitations that are listed as follows:

- The study considered only perceptions and not analyzed technical aspects of integrated reporting through integrated reports.
- The methodology adopted for study itself is suffers from its own limitations that can be affecting on the results.

Scope for Further Research

Finally study identified certain issue which may become an opportunity for future research is analysing the integrated reports and comparing within the industry or across the border of the country. Further feasibility analysis can be conducted on the suitability of XBRL for integrated reporting for Indian scenario.

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STOCK MARKET VOLATILITY IN MAJOR INDICES OF WORLD:
AN ANALYTICAL STUDY OF BSE SENSEX, NASDAQ, HANG SANG, NIKKEI AND DOW JONES

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ABSTRACT

Volatility in stock market has turned into a matter of common worry for investors, regulator and stock brokers. Stock market volatility obstructs monetary performance through consumer spending. Stock market volatility may likewise influence business investment spending. Further the extraordinary volatility could upset the smooth working of the financial system and lead to regulatory changes. This research paper is expected to throws light on the behavior of mean and volatility across the BSE Sensex, Nasdaq, Hang Sang, Nikkei and Dow Jones and identifies the risk present in each of these markets that is being generated. The paper used descriptive statistics for the return series include mean, standard deviation, skewness, kurtosis. The return distribution of BSE Sensex is positively skewed while Nasdaq, Hang Sang, Nikkei and Dow Jones returns are negatively skewed, indicating that the distribution is non-symmetric. Negative values of skewness of Nasdaq, Hang Sang, Nikkei and Dow Jones suggest that the probability of generating negative return is higher. The analysis detects the persistence of volatility in Hang Sang market is less as compared to other market of the world.

KEYWORDS: *Volatility, BSE Sensex, Nasdaq, Hang Sang, Nikkei, Dow Jones.*

Introduction

Volatility in stock market has turned into a matter of common worry for investors, regulator and stock brokers. Stock market volatility obstructs monetary performance through consumer spending. Stock market volatility may likewise influence business investment spending. Further the extraordinary volatility could upset the smooth working of the financial system and lead to regulatory changes. Understanding the stock-market risk and return is imperative in light of the fact that more risk adverse investor request a higher risk, this makes a higher cost of capital hindering profitable corporate venture.

Review of Literature

According to "Juhi Ahuja" (2012) presents an review of Indian Capital Market and its structure. In a decade ago or thereabouts, it has been seen that there has been a

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change in perspective in Indian capital market. The use of numerous changes and advancements in Indian capital market has made the Indian capital market practically identical with the universal capital markets. Presently, the market includes a created administrative component and an advanced market framework with developing business sector capitalization, showcase liquidity, and activation of assets. The development of Private Corporate Debt showcase is additionally a decent advancement supplanting the financial method of corporate financing. In any case, the market has seen its most noticeably bad time with the ongoing worldwide financial emergency that began from the US sub-prime home loan market and spread over to the whole world as a disease. The capital market of India conveyed a languid exhibition.

According to “Arun Jethmalani” (2014) investigated the presence and estimation of hazard engaged with putting resources into corporate securities of shares and debentures. He recognized that chance is normally decided, in light of the reasonable difference of profits. It is progressively hard to look at 80% chances inside a similar class of ventures. He is of the conclusion that the financial specialists acknowledge the hazard estimation made by the FICO score organizations, yet it was addressed after the Asian emergency. He finished up his article by remarking that chance isn’t quantifiable. In any case, chance is determined based on memorable instability. Returns are corresponding to the dangers, and speculations ought to be founded on the financial specialists’ capacity to hold up under the dangers.

According to “Avijit Banerjee” (2015), Iinvestigate the value of the individual securities which will be utilize in portfolio development. Specialized Analysis recognizes the most proper time to purchase or sell the stock. It expects to stay away from the entanglements of wrong planning in the speculation choices. He additionally expressed that the advanced portfolio writing suggests ’beta’ value Pas the most worthy proportion of danger of scrip. The securities having low P ought to be chosen for building a portfolio so as to limit the dangers.

Objectives of the Study

The objectives of the study are as follows:

- To study the volatility of major indices of world.
- To study the causes of volatility of major indices of world

Research Design

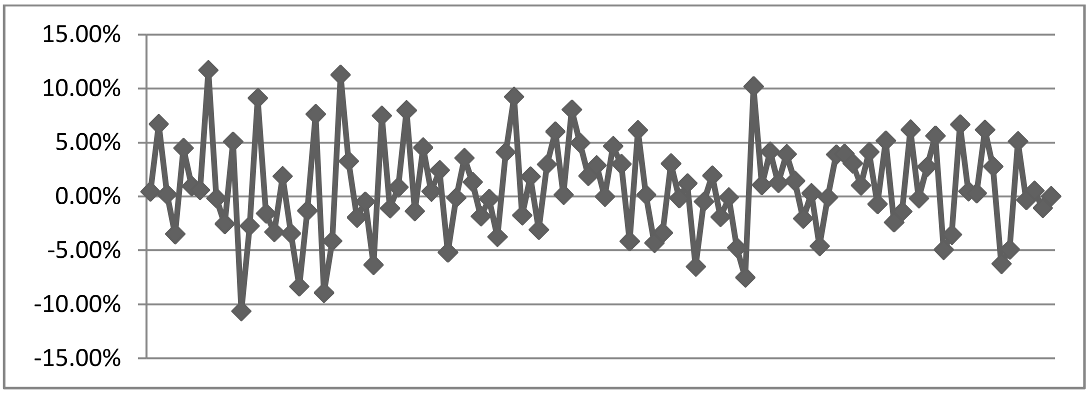
We collected data on monthly closing price of BSE Sensex, Nasdaq, Hang Sang, Nikkei and Dow Jones from January 2010 to February 2019.The period is the most recent one. The stock markets have become increasingly integrated. We use yahoo finance database for analyzing volatility. This research paper uses descriptive statistics to summarize and portray important characteristic of large sets of data. The two key areas that have been used in this paper are measures of central tendency and measure of dispersion. In the territory of investments, measures of central tendency give a sign of an investment’s normal return and measure of dispersion demonstrate the riskiness/volatility of an investment.

Data Analysis

- **BSE Sensex**

The BSE SENSEX is a record of thirty settled and monetarily solid organizations recorded on Bombay Stock Exchange. The 30 component organizations which are probably the biggest and most effectively exchanged stocks are illustrative of different mechanical divisions of the Indian economy.

Graph 1: BSE Sensex

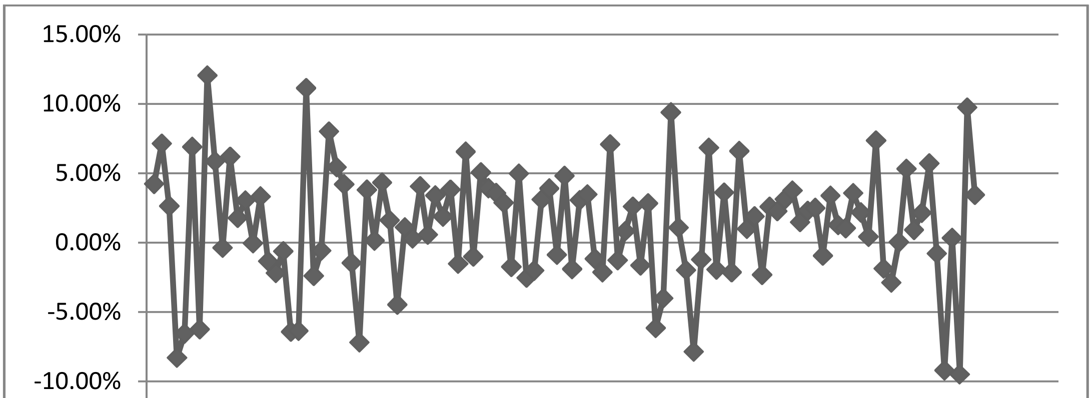


The graph no.1 show the return pattern of BSE sensex from Jan 2010 to Feb 2019.In the year Jan 2010 the BSE Sensex was 16429.55,jumped to 35867.44 registered the CAGR of 0.72%.In the month of August 2010 the sensex cross 20069.12,registered the growth rate of 11.67% as compared to 17971.28 in the month of July 2010.In the month of December 2010 the sensex felt down to 18327.76, registered the negative growth rate of 10.64%.From December 2010 to August 2013 the sensex was moving in the range of 18327.76 to 19379.77. In the month of September 2013 the sensex touched the height of 21164.52.In the month of February 2016 the sensex touched 25341.86 mark and registered the growth rate of 10.17%.In the month of April 2017 the sensex crossed 31145.80.In the month of December 2017 the sensex was 35965.02.In July 2018 the sensex was 38645.07.In the month of August 2018 the sensex fall down to 36227.15 and 34442.05 in the month of September 2018.

- **Nasdaq**

The NASDAQ Composite is a stock market index of the basic stocks and comparable securities recorded on the NASDAQ stock market. Alongside the Dow Jones Average and S&P 500 it is one of the three most-pursued indices in US stock markets.

Graph 2: Nasdaq Index

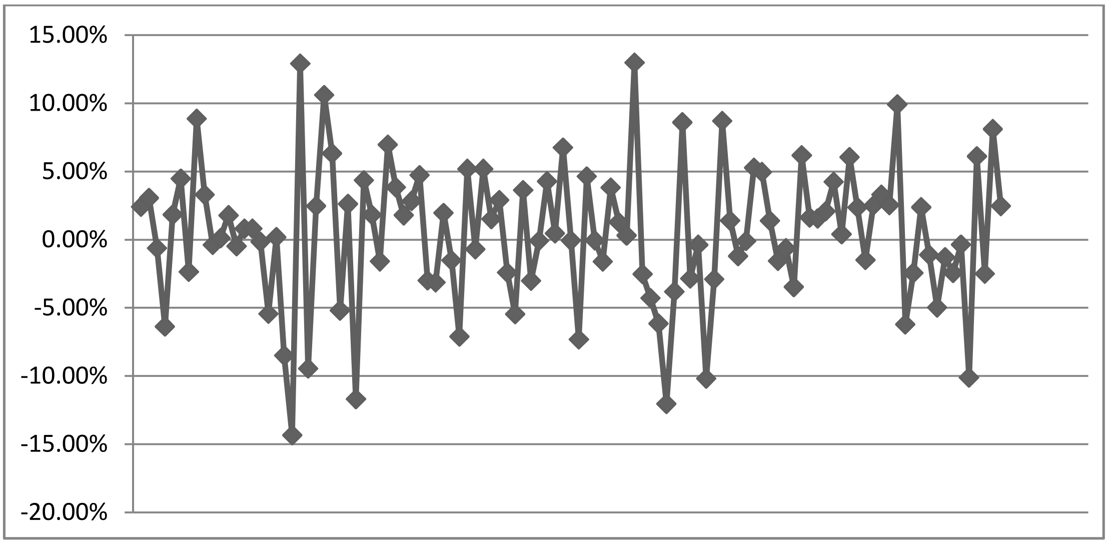


The graph no.2 show the return pattern of Nasdaq Index from Jan 2010 to Feb 2019.In the year Jan 2010 the Nasdaq index was 2238.26,increased to 7532.53 registered the CAGR of 1.11%.In the month of march 2012 the Nasdaq index crossed 3091.57. In the month of March 2013, July 2013, September 2013 the index crossed 3267.52, 3626.37, and 3771.48 respectively. In the month of November 2013 the Nasdaq index crossed 4059.89.registered the growth rate of 7.65%.In February 2014 the index was 4308.12 registered the growth rate of 6.11% as compared to November 2013.In the month of May 2015 the index reached to 5070.03,registered the growth rate of 17.68% as compared to February 2014.In the month of April 2017 the Nasdaq was 6047.6,registered the growth rate of 19.28% as compared to may 2015.In the month of January 2018 the index crossed 7411.48 registered the growth rate of 7.36% as compared with December 2017.In the month of August 2018 the index reached the new highest of 8109.54 as compared to 7411.48 in the month of January 2018.From September 2018 the Nasdaq index was decreasing month to month and reached 7532.53 mark.

- **Hang Sang Index**

The Hang Sang Index is situated in Hong Kong. It is utilized to record and screen day by day changes of the biggest organizations of the Hong Kong stock exchange and is the primary pointer of the general market execution in Hong Kong.

Graph 3: Hang Sang Index

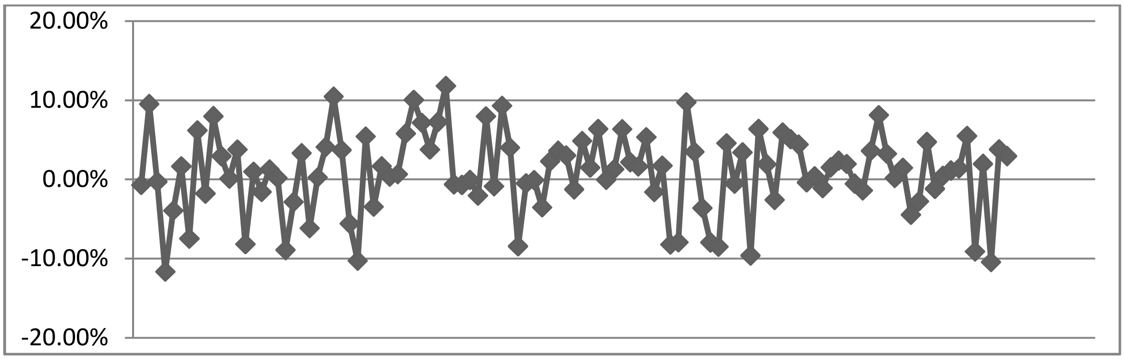


The graph no.3 show the return pattern of Hang Sang Index from Jan 2010 to Feb 2019.In the year Jan 2010 the Hang Sang index was 20608.70,increased to 28633.18 registered the CAGR of 0.30%.In the month February 2010 the Index was 21239.35 registered the growth rate of 3.306% as compared to January 2010.In September 2010 the index reached up to 23096.32 and hovering in the range of 23096.32 to 23468.2 in the month of March 2011In the month of February 2017 the Index was 24111.59, reached to 25660.65 in the month of April 2017 registered the growth rate of 17.22%In the month of July 2017 index was 27970.30, 28245.54 (September 2017), 29177.35 (October 2017) 32887.27 (December2017), 30844.38 (January 2018), 30093.38 (February 2018), 28955.11 (May 2018), 27888.55 (July 2018), 24979.69 (September2018).In the month of January 2019 the index reached 28633.18.

- **Nikkei 225 Index**

The Nikkei 225, all the more ordinarily called the Nikkei, the Nikkei list, or the Nikkei Stock Average, is a stock exchange in Tokyo Stock Exchange. It has been determined every day by the Nihon Keizai Shinbun newspaper since 1950.

Graph 4: Nikkei 225 Index

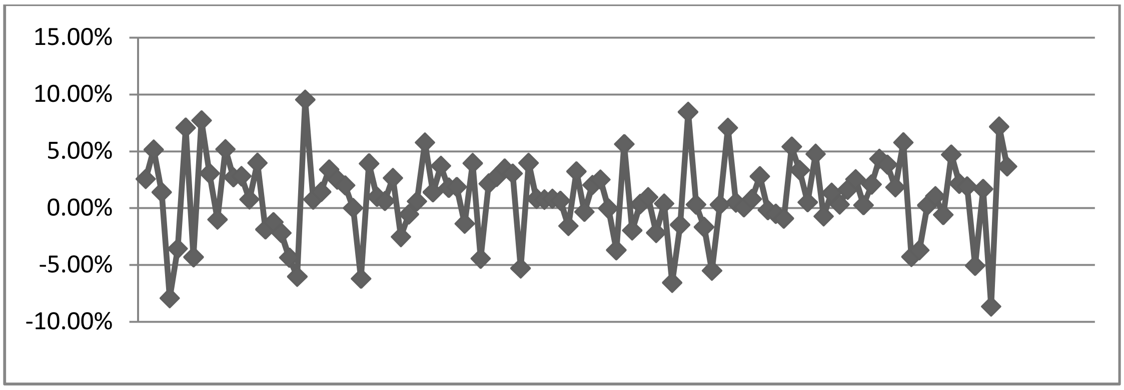


The graph no.4 show the return pattern of Nikkei 225 Index from Jan 2010 to Feb 2019.In the year Jan 2010 the Hang Sang index was 10126.03,increased to 21385.16 registered the CAGR of 0.68%.In the month of February 2010 the index was 11089.94,decreases to 11057.40 in march 2010.From April 2010 to October 2010 the index was in the range of 9768.7 to 9937.04.It has been observed that from November 2012 the index started increasing from 10395.18.In march 2013 it reached 13860.86 registered the growth rate of 33.33%.In october 2010 it reached 15661.87.In the month of April 2015 the index crossed the level of 20563.15 and reached 24120.04 in the month of August 2018.In between The year 2015 to 2018 the index was moving in following level 18890.48 (July 2015), 17388.15 (August 2015), 19747.47 (October 2015), 16026.76 (January 2016),17234.98 (April 2016),15575.92 (May 2016),19114.37 (November 2016),20356.28 (August 2017).

Dow Jones Industrial Average

The Dow Jones Industrial Average is situated in the United States of America and comprises of thirty stocks.

Graph 5: Dow Jones Industrial Average



The graph no.5 show the return pattern of Dow Jones Industrial Average from Jan 2010 to Feb 2019.In the year Jan 2010 the Dow Jones Industrial Average was 10325.26,increased to 25916 registered the CAGR of 0.84%.From the level of 10325.26 the index reached the level of 12226.34 in the month of February 2011.In April 2012 the index reached 13213.63 and 15115.57 in May 2013.In December 2015 the index was 17425.03 level.In the month of February 2017 the index crossed the 20812.24 level and reached the level of 26149.22 level in the month of September 2018.From October 2018 to February 2019 the index was in the range of 25115.76,25538.46,23327.46, 24999.67and 25916.

Statistical Analysis

Table no 1 show the descriptive statistics of major indices of the world. The above table summarizes the important characteristics of large data set. The focus of this research study is on the use of descriptive statistics to consolidate a mass of numerical data into useful information.

Table 1: Descriptive Statistics of World Major Indices

Particular	Bse Sensex	Nasdaq	Hang Seng	Nikkei	Dow Jones
Mean	0.82%	1.25%	0.45%	0.81%	0.93%
Standard Error	0.42%	0.41%	0.49%	0.49%	0.33%
Median	0.45%	1.61%	0.47%	1.28%	0.95%
Mode	#N/A	#N/A	#N/A	#N/A	#N/A
Standard Deviation	4.40%	4.26%	5.09%	5.06%	3.48%
Sample Variance	0.19%	0.18%	0.26%	0.26%	0.12%
Coefficient of Variance	538.13%	341.30%	1121.76%	625.44%	373.65%
Kurtosis	-0.017962	0.24383	0.59143584	-0.0278	0.3585092
Skewness	6.09%	-23.61%	-28.05%	-40.71%	-32.01%
Range	22.31%	21.53%	27.31%	23.45%	18.20%
Minimum	-10.64%	-9.48%	-14.33%	-11.65%	-8.66%
Maximum	11.67%	12.04%	12.98%	11.80%	9.54%
Sum	89.18%	135.98%	49.42%	88.27%	101.50%
Count	109	109	109	109	109

- **Mean Value:** The mean value uses all the information available about the observations. The mean value of different indices of the world indicates the expected return from the investment. The expected return from Nasdaq index is 1.25% followed by Dow Jones (0.93%), BSE Sensex (0.82%), Nikkei (0.81%) and Hang Seng (0.45%).
- **Median Value:** The median is important because the mean value can be affected by extremely large or small values(outliers).On the basis of median the expected return from Nasdaq is (1.61%) followed by Nikkei(1.28%),Dow Jones(0.95%).
- **Range:** The range is a generally straightforward measure of variability, but when utilized with different estimates it gives incredibly valuable data. The range is the difference between the largest and the smallest value in the data set. The largest variability in the data set is observed in the Hang Sang index (27.31%) followed by Nikkei (23.45%), BSE Sensex (22.31%), Nasdaq (21.53%) and Dow Jones (18.20%).
- **Sample Variance:** Defined as the average of the squared deviation from the mean. Table no1 indicate that the average variation from the mean return is $0.26\%^2$ in Hang Sang and Nikkei followed by BSE Sensex ($0.19\%^2$), Nasdaq ($0.18\%^2$) and Dow Jones ($0.12\%^2$).
- **Standard Deviation:** The serious issue with the utilization of variance is the trouble of interpretation. This issue is moderated using the standard deviation. The standard deviation is the square root of the variance. The standard deviation shows the riskiness or volatility of the investment. The study reveals that the highest volatility is observed in the Hang Sang index (5.09%) followed by Nikkei (5.06%), BSE Sensex (4.40%), Nasdaq (4.26%) and Dow Jones (3.48%).
- **Coefficient of Variance:** An immediate examination between two or more measure of dispersion might be difficult. To make a meaningful comparison coefficient of variance must be utilized to measure the risk (variability) per unit of expected return (mean).The table no.1 indicate that there is less dispersion(risk) per unit of monthly return for

Nasdaq(341.30%) followed by Dow Jones(373.65%),BSE Sensex (538.13%),Nikkei(625.44%) and Hang Sang(1121.76%).

- **Skewness:** For a positively skewed distribution in the case of BSE Sensex (6.09%), the mode is less than the median (0.45%), which is below the mean (0.82%) .The mean, is influenced by great positive exceptions which will in general draw the mean upward or progressively positive. For a negatively skewed distribution in the case of following indices i.e.Nasdaq (-23.61%), Hang Sang (-28.05%), Nikkei (-40.71%) and Dow Jones (-32.01%), the mean is below than the median, which is lesser than the mode. The mean is influenced by great negative exceptions which pull the mean downward.
- **Kurtosis:** It is a measure with respect to the kurtosis of a normal distribution, which is 3.Excess kurtosis (> than 0) show a distribution is leptokurtic(more peaked, fat tails),whereas less kurtosis(< than 0) demonstrate a platykurtic distribution(less peaked, thin tails).Excess kurtosis values that surpass 1.0 in absolute value are viewed as substantial. Excess kurtosis in case of BSE Sensex (-3.01), Nasdaq (-2.75), Hang Sang (-2.40), Nikkei (-3.02) and Dow Jones(-2.64).

Hypothesis Testing

- **BSE Sensex**

  Null Hypothesis (H_0)

  There is no significance volatility in BSE Sensex return during the period of Jan 2010 to Feb 2019 i.e. $\sigma = 0$.

  Alternative Hypothesis (H_1)

  There is significance volatility in BSE Sensex return during the period of Jan 2010 to Feb 2019 i.e. $\sigma > 0$.
- **Interpretation of t-test**

It is one tailed test and level of significance is 5%, the critical value of t is 1.65.Since the calculated value of t is 1.95 which is more than the table value, we conclude that there is a significant volatility in BSE Sensex return during the study period of Jan 2010 to Feb 2019.Hence, null hypothesis is not accepted.

- **Nasdaq**

  Null Hypothesis (H_0)

  There is no significance volatility in Nasdaq return during the period of Jan 2010 to Feb 2019 i.e. $\sigma = 0$.

  Alternative Hypothesis (H_1)

  There is significance volatility in Nasdaq return during the period of Jan 2010 to Feb 2019 i.e. $\sigma > 0$.
- **Interpretation of t-test**

It is one tailed test and level of significance is 5%, the critical value of t is 1.65.Since the calculated value of t is 3.07 which are more than the table value, we conclude that there is a significant volatility in Nasdaq return during the study period of Jan 2010 to Feb 2019.Hence, null hypothesis is not accepted.

- **Hang Sang**

  Null Hypothesis (H_0)

  There is no significance volatility in Hang Sang return during the period of Jan 2010 to Feb 2019 i.e. $\sigma = 0$.

  Alternative Hypothesis (H_1)

  There is significance volatility in Hang Sang return during the period of Jan 2010 to Feb 2019 i.e. $\sigma > 0$.

- **Interpretation of t-test**

It is one tailed test and level of significance is 5%, the critical value of t is 1.65.Since the calculated value of t is 0.92 which is less than the table value, we conclude that there is not a significant volatility in Hang Sang return during the study period of Jan 2010 to Feb 2019.Hence, null hypothesis is accepted.

- **Nikkei 225 index**

Null Hypothesis (H_0)

There is no significance volatility in Nikkei 225 index return during the period of Jan 2010 to Feb 2019 i.e. $\sigma = 0$.

Alternative Hypothesis (H_1)

There is significance volatility in Nikkei 225 index return during the period of Jan 2010 to Feb 2019 i.e. $\sigma > 0$.

- **Interpretation of t-test**

It is one tailed test and level of significance is 5%, the critical value of t is 1.65.Since the calculated value of t is 1.67 which is more than the table value, we conclude that there is a significant volatility in Nikkei 225 index return during the study period of Jan 2010 to Feb 2019.Hence, null hypothesis is not accepted.

- **Dow Jones Industrial Average**

Null Hypothesis (H_0)

There is no significance volatility in Nikkei 225 index return during the period of Jan 2010 to Feb 2019 i.e. $\sigma = 0$.

Alternative Hypothesis (H_1)

There is significance volatility in Nikkei 225 index return during the period of Jan 2010 to Feb 2019 i.e. $\sigma > 0$.

- **Interpretation of t-test**

It is one tailed test and level of significance is 5%, the critical value of t is 1.65.Since the calculated value of t is 1.67 which is more than the table value, we conclude that there is a significant volatility in Nikkei 225 index return during the study period of Jan 2010 to Feb 2019.Hence, null hypothesis is not accepted.

Findings

Following are the findings of the study:

- The mean return of BSE Sensex, hang Sang, Nikkei and Dow Jones are less as compared to Nasdaq that means investment in Nasdaq index generates more profit to other indices of the world.
- The volatility in Hang Sang index was less as compared to other indices of the world which gave assurance to investor that their investment return will not fluctuate more and they can earn good amount of money.
- The Increase volatility in stock market will increase the expected risk premium and thereby affect the company's cost of capital.
- The negative value of skewness of Nasdaq, Hang Sang, Nikkei and Dow Jones suggests that the probability of generating negative return is higher.
- The US is the greatest economy in the world. When the Dow Jones fell, the effect was seen in the overall major stock market indices of the world.

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AN ANALYSIS OF FINANCIAL PERFORMANCE OF PETROLEUM COMPANIES BY USING ALTMAN Z - SCORE ANALYSIS

(WITH SPECIAL REFERENCE TO BHARAT PETROLEUM CORPORATION LTD, INDIAN OIL CORPORATION LTD & HINDUSTAN PETROLEUM CORPORATION LTD.)

C.Ramshesh*
Dr. Sreenivas**

ABSTRACT

Its need an hour to know the performance of Oil companies namely Indian Oil Corporation, Hindustan Petroleum Corporation Limited, Bharat Petroleum because market is having highly volatility, through A predictive model created by Edward Altman Z score in the 1960's.This model consists of different financial ratios to ascertain the likelihood of bankruptcy. The present study intends to analyze the financial health of selected oil companies through the application of altman z score model. It is found that the financial health of the selected companies under study is Bharat Petroleum Corporation is relatively better than Indian Oil Corporation and Hindustan petroleum.

KEYWORDS: *Z - Score Analysis, Financial Health, Bankruptcy.*

Introduction

The backbone of any organization is its financial soundness. It means how they are procuring the funds and utilizing the same funds in a effective utilization. Therefore continuous monitoring is required to take corrective measures to meet the short term and long term requirements adequately.

Financial statements are the source of information to the investors based on which the financial planning and decision making would takes places. The financial statements consist of profit & loss account and balance sheet. The Profit & loss Account provides data about operating activities of the business concern and it projects the profit & loss of the business, whereas balance sheet gives the information about the assets & liabilities of the business.

Through this source only we would assess the company's strengths & weakness. Pivotal decisions would be taken by using the financial ratios measured from financial statements. A single ratio or few ratios we could not take the financial decisions. It doesn't serve our purpose.

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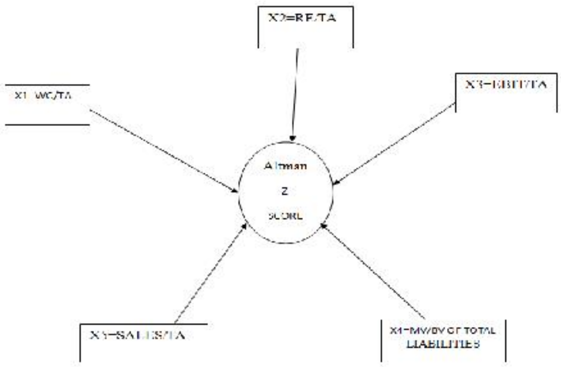
Therefore, Altman Z score consisting of different financial ratios in one equation i.e

Z=1.2x1+1.4x2+3.3x3+0.6x4+0.99x5



X1= Working Capital/Total assets

X2= Retained Earnings/Total assets

X3= Earnings before interest and taxes/Total assets

X4= Market value of share/Total assets

X5= Sales/Total assets

Variable Used in Z Score Analysis

The following variables (accounting ratio) has taken as variables to combine them into single index i.e., Altman Z score analysis which measure the efficiency in envisaging the bankruptcy.

X1: It measures the relationship between working capital to total assets (WC/TA).This ratio measures of the net liquid assets of a business concern.

X2: It measures the relationship between retained earnings/total assets. It indicates profitability to the firm size.

X3: It is proportion of earnings before interest and taxes total assets (EBIT/TA).It says that how much firm has earned before interest and taxes out off total assets.

X4: It measures the relationship of market value of equity to book value of total liabilities. It gives the market's view of the company relative to the total liabilities. It measures how much assets of a firm can decline in value before the liabilities exceed the assets and the concern becomes insolvent.

X5: It shows the relationship of sales to total assets (SA/TA). The assets turnover ratio is a standard financial measure for illustrating the sales generating capacity of the assets.

Standard Z Score Parameters

Situation	Z score Value	Zones	Verdict
I	Below 1.8	Bankruptcy Zone	Failure is certain
II	1.8 – 2.99	Healthy zone	Uncertain to predict
III	Above 2.99	Too Healthy zone	Not to fall.

Objectives of the Study

- This research paper study attempts to assess the financial performance of selected petroleum companies namely Indian oil corporation, Bharat Petroleum corporation limited, Hindustan petroleum by using the Altman Z score analysis
- To know the impact of individual ratio on Z index (Relative difference)

Scope of the Study

The study is completely descriptive and analytical. The Z index for a period of six years (2010-2011to 2016-17) has been calculated for 3 petroleum companies namely Bharat petroleum, Indian Oil Corporation, Hindustan petroleum, were included in the study(see appendix). Data has been gathered for 7 years (2010-11 to 2016-2017) from secondary sources such as annual reports of companies.

Literature Review

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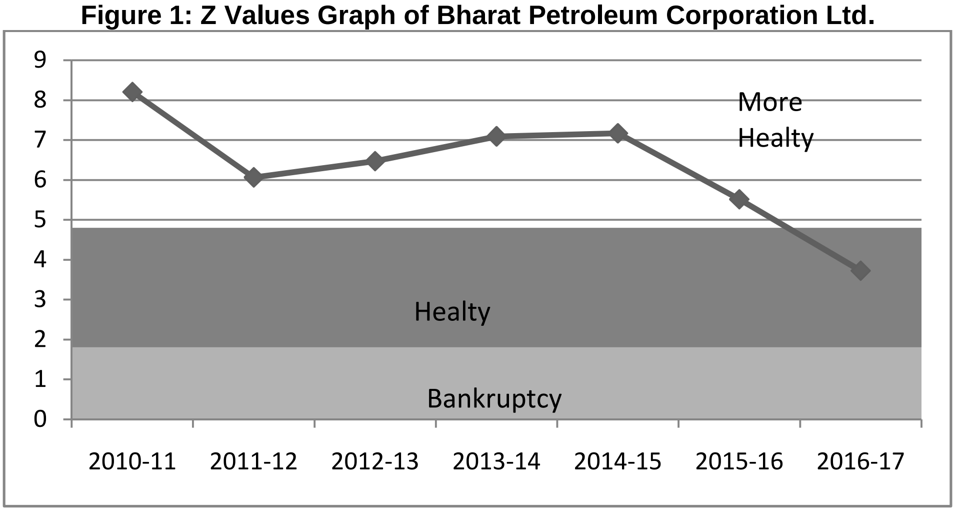
Table 1: Calculation of X1, X2, X3, X4, X5 & Z Values of Bharat Petroleum Corporation Limited.

Variables ì / Years í	X1	X2	X3	X4	X5	Z values
2010-2011	0.75135	0.12234	0.10649	0.01542	6.83722	8.20241
2011-2012	0.34223	0.07623	0.14002	0.01233	5.12561	6.06121
2012-2013	0.32908	0.09152	0.18269	0.00929	5.39111	6.46866
2013-2014	0.22625	0.10364	0.22557	0.0067	5.98423	7.08937
2014-2015	0.02451	0.14903	0.26005	0.0137	6.12222	7.16542
2015-2016	0.02707	0.14506	0.26536	0.01759	4.4353	5.51274
2016-2017	-0.10095	0.031743	0.145995	1.15884	2.646777	3.720691

Sources: Compiled data from company balance sheet.

Figure 1: Z Values Graph of Bharat Petroleum Corporation Ltd.



Interpretation

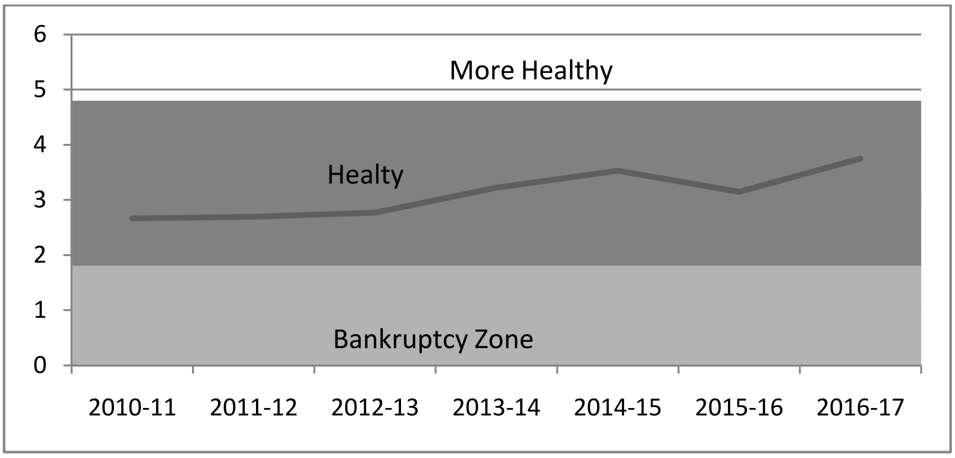
- **X1= working capital÷ Total Assets:** It has been observed that the working capital to total assets of Bharat Petroleum Corporation Limited had drastic changes since 2010-11; 0.751355, for the next subsequent years are 0.34223, 0.32908, 0.22625, 0.02451, 0.02707. And the next year is -0.10095 It means that in the year 2010-2011 the company has following conservative current policy for the next years it has switch over to aggressive current policy.
- **X2=Retained Earnings÷ Total Assets:** It has been observed that retained earnings to total assets of Bharat Petroleum Corporation Limited is in the year 2010-11; 0.122335 for the next 5 years are 0.076231; 0.091519; 0.1036; 0.149029; 0.145065 0.031743. It means that from 0.122 falls down to 0.076 in the year 2011-12 relatively it has increases to 0.091 in the year 2012-13 for the next years consistently it has increasing i.e 0.10364; 0.14903; slightly it has falls down last 2 years i.e 0.14506, 0.031743 respectively.
- There may be more chances are there to borrow the amount from outside if the retained earnings to total assets are decreases.
- **X3=Earnings Before Interest & Taxes÷Total Assets:** It has been found that EBIT to total assets of Bharat Petroleum Corporation Limited has been increasing since 2010-11; 0.106492 for the next years are 0.14002, 0.18269, 0.22557, 0.26005, 0.26536, 0.14599
- It is quite apparent that the firm's profits has been increasing since 2010-11
- **X4=Market Value Of Equity÷ Book Value of Total Liabilities:** It has been found that the Market Value Of Equity ÷ Total Assets of Bharat Petroleum Corporation Limited is gradually decreasing since 2010-11, 0.01542 and the next year ratios are as follows 0.01233, 0.00929, 0.0067, 0.0137, 0.01759.After 2011-12 it has continuously falls down again it gets recovery in the year 2014-15 0.0137 2015-16 0.01759 1.15884 respectively. The higher the value it is better ratio
- **X5=Sales ÷Total Assets:** It has found that the sales to total assets of Bharat Petroleum Corporation Limited gradually it is increasing except in the last year 2015-16.The ratios in the year 2010-11 is 6.83722 and the next years are as follows 5.12561; 5.39111; 5.98423; 6.12222; 4.4353, 2.646777 respectively.

Table 2: Calculation of X1, X2, X3, X4, X5 and Z values of Hindustan Petroleum Limited

	X1	X2	X3	X4	X5	Z VALUES
2010-2011	0.115008	0.01627	0.05319	0.00887	2.34478	2.66296
2011-2012	-0.08354	0.00811	0.04723	0.00619	2.64572	2.68995
2012-2013	-0.066	0.00757	0.04582	0.00513	2.70877	2.76738
2013-2014	0.0571	0.01443	0.05094	0.00386	2.99296	3.22218
2014-2015	0.05779	0.02568	0.07209	0.00936	3.21331	3.52999
2015-2016	0.00993	0.03486	0.09051	0.01485	2.80604	3.14629
2016-2017	-0.02345	0.025784	0.121795	0.02171	2.720855	3.116557

Sources: Compiled data from company balance sheets.

Figure 2: Z Values Graph of Hindustan Petroleum Limited



Interpretation

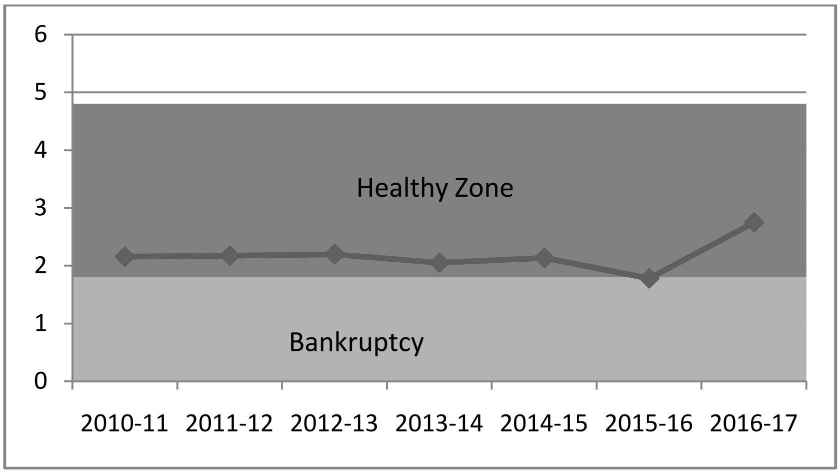
- **X1=Working Capital ÷ Total Assets:** It has been found that the working capital to total assets of Hindustan Petroleum Limited is decreasing since 2010-11, in the year 2010-2011 ratio is 0.115008, and the next subsequent years are -0.008113,-0.66, 0.057098, 0.057794, 0.009929, 0.02345, The company is implementing aggressive current policy.
- **X2=Retained Earnings ÷ Total Assets:** It has been observed that the retained earnings to total assets of Hindustan petroleum Limited are drastically decreasing since 2010-2011 is 0.0163 and the next subsequent years are 0.008, 0.007,0.014,0.02,0.03, 0.025784 respectively.
- There are more chances are there if the retained earnings to total assets ratios are decreasing year by year it means that they are borrowing the amount from outside .
- **X3= Earnings Before Interest & Taxes ÷Total Assets:** It has been found that the EBIT/Total assets ratio of Hindustan Petroleum Limited is quite similar with minimum changes. i.e, in the year 2010-11 is 0.05319, 0.04723, 0.04582, 0.05094, 0.07209, 0.09051, 0.121795 i.e., 2016-17 respectively.
- **X4=Market Value of the Share÷ Book Value of total liabilities:** It has been observed that the market value of the share/book value of total liabilities has been decreasing from 2010-11 to 2013-14 again it has increase for the next consecutive years the values are 0.00887, 0.00619, 0.00513, 0.00386,0.00936,0.01485,0.02171 respectively.
- **X5=Sales ÷Total assets:** It has been observed that the sales to total assets ratio gradually increasing since 2010-11 i.e., 2.34478, 2.64572, 2.70877, 2.99296, 3.21331, 2.80604, 2.720855 respectively, it means the effective utilization of assets for the production purposes.

Table 3: Calculation of X1, X2, X3, X4, X5 and Z Values of Indian Oil Corporation Limited

	X1	X2	X3	X4	X5	Z Values
2010-2011	0.138213	0.027513	0.067754	0.003095	1.744114	2.156493
2011-2012	0.005599	0.012137	0.081254	0.001908	1.898776	2.172782
2012-2013	0.018594	0.014482	0.053827	0.00221	1.996008	2.197591
2013-2014	-0.00294	0.018018	0.052545	0.001359	1.87474	2.0519
2014-2015	-0.00396	0.015215	0.044403	0.002204	1.990117	2.134618
2015-2016	-0.03909	0.02789	0.07712	0.002586	1.547184	1.779894
2016-2017	-0.0607	0.024628	0.114832	1.178472	1.718172	2.748655

Sources: Compiled data from company balance sheets.

Figure 3: Z Values Graph of Indian Oil Corporation Limited



Interpretations

- **X1=Working Capital ÷Total Assets:** It has been observed that the X1 ratio of Indian Oil Corporation is decreasing. In the year 2010-2011 the ratio of X1 is 0.138213 and the next subsequent years are 0.005599, 0.018594, 0.018594, -0.00294, -0.00396, -0.03909, -(0.067) respectively. The Company is maintaining aggressive current policy.
- **X2=Retained Earnings ÷Total Assets:** It has been found that the ratio of X2 of Indian Oil Corporation. In the year 2010-2011 the ratio is 0.0275 and the next subsequent years are decreasing 0.01213, 0.014482, and thereby remaining years are increasing 0.018018, 0.015215,0.02789,0.024628 respectively.
- **X3=Earnings Before Interest & Taxes ÷Total Assets:** It has been found the EBIT÷ Total assets of Indian Oil Corporation is increasing since 2010-2011 i.e., 0.06775, 0.08125, 0.0538, 0.0525, 0.0444, 0.077, 0.1148 respectively.
- **X4=Market Value of Equity ÷Total book value of liabilities:** It has observed that the ratio of x4 in the year 2010-11 is 0.00309, and the next subsequent years are 0.0019, 0.0022, 0.0013, 0.0022, 0.0025, 1.178 respectively.
- **X5=Sales ÷Total Assets:** It has been found that the X5 ratio of Indian Oil Corporation is continuously increasing since i.e, 2010-2011 1.74114 and the next subsequent years are 1.898776;1.996008;1.87474;1.990117;1.547184 1.71817 respectively it means the utilizing the assets very effectively.

Table 4: Impact of Individual Ratios of Bharath Petroleum Corporation Limited on Z Score by Using the Relative Difference

Year	2010-11	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
X1=WC÷TA	0.7514	0.342	0.331	0.23	0.0245	0.0271	-0.10095
RD OF X1		-0.657766	-0.671	-0.77375	-0.9755	-0.973	-1.101
X2=RE÷TA	0.12234	0.076231	0.091519	0.103636	0.149029	0.145065	0.031743
RD OF X2		-0.923769	-0.908481	-0.896364	-0.850971	-0.854935	-0.97383
X3=EBIT÷TA	0.1065	0.14002	0.18289	0.225567	0.260047	0.265356	0.145995
RD OF X3		-0.85999	-0.817314	0.774433	0.73995	-0.73464	-0.854013
X4=MVE÷TA	0.01543	0.01232	0.009289	0.0067	0.01369	0.01759	1.158839
RD OF X4		-0.98767	-0.990711	-0.9933	-0.98630	0.982409	0.158839
X5=SALES÷TA	6.837218	5.12561	5.391109	5.98423	6.122221	4.43529	3.00225
RD OF X5		-0.25147	0.05282	0.11002	0.02312	-0.275544	-0.32309

Table 5: Impact of Individual Ratios of Hindustan Petroleum Corporation Limited on Z Score by Using the Relative Difference

Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
X1=WC÷TA	0.115008	-0.08354	-0.066	0.057098	0.009929	0.009929	-0.02345
RD OF X1		-1.08354	-1.066	-0.942902	-0.942206	0.990071	-1.0234463
X2=RE÷TA	0.016269	0.008113	0.007567	0.014433	0.02568	0.03486	0.025784083
RD OF X2		-0.991887	-0.99243	-0.985567	-0.97432	-0.96514	-0.9742159
X3=EBIT÷TA	0.053189	0.047231	0.045825	0.050941	0.07209	0.090508	0.121794721
RD OF X3		-0.952769	-0.95418	-0.949059	-0.92791	-0.909492	-0.87820589
X4=MVE÷TA	0.008873	0.006195	0.005134	0.003865	0.009356	0.014848	0.021709841
RD OF X4		-0.993805	-0.99486	-0.996135	-0.990644	-0.985152	-0.9782959
X5=SALES÷TA	2.343777	2.645721	2.708769	2.992963	3.213309	2.80604	2.720855359
RD OF X5		1.645721	1.708769	1.992963	2.213309	1.80604	1.720855359

Table 6: Impact of Individual Ratios of Indian Oil Corporation Limited on Z Score by using the Relative Difference

Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
X1=WC÷TA	0.138213	0.005599	0.018594	-0.00294	-0.00396	-0.03909	-0.0607
RD OF X1		-0.9944	-0.9814	-1.003	-1.004	-1.04	-1.0607
X2=RE÷TA	0.027513	0.012137	0.014482	0.018018	0.015215	0.02789	0.024628
RD OF X2		-0.9888	-0.98552	-0.9828	-09859	-0.97211	-0.9753
X3=EBIT÷TA	0.067754	0.081254	0.053827	0.052545	0.044403	0.07712	0.114832
RD OF X3		-0.9187	-09461	-0.9474	-0.9555	-0.92288	-0.8852
X4=MVE÷TA	0.003095	0.001908	0.00221	0.001359	0.002204	0.002586	1.178472
RD OF X4		-0.9981	-0.9978	-0.9986	-0.9978	-0.9974	0.1784
X5=SALES÷TA	1.744114	1.898776	1.996008	1.87474	1.990117	1.547184	1.718172
RD OF X5		0.898776	0.996008	0.87474	0.990117	0.547184	0.718172

The above tables 4, 5, 6, represents about the relative difference concept in this research paper. It has observed of 3 companies relative difference its very nearer to 0. But all 5 ratios would give certain impact.

Findings

Table 1 Bharat Petroleum Corporation limited is too healthy zone the z values of this company are above 2.99. The company is quite prosperity during the period of study.(2010-2011 to 2016-17). It means that the managerial efficiency of the organization is extremely good, except in the year of 2016-17 X1 ratio gets negative however the value of Z is above 2.99 i.e 3.72

Table 2 It can be interrelated from the above table that the Z values are 2.66,2.68,2.76 in the years 2010-11,2012-13 respectively and the next consequently years are 3.22,3.52,3.14, 3.11 2013-14,2014-15,2015-16, 2016-17 respectively. But in the year 2011-12 the x1 ratios are -0.083,-0.666 due to excess of current liabilities over current assets again in the year 2016-17 x1ratio is -0.023 but difficult to predict during the period of 2010-11 to 2012-13 for the next consequent years the value of z is above 2.99

Table 3 Indian oil corporation limited shows that z values are relatively less than rule of thumb practices i.e., 2.99 there may be many factors which would influences on the Z values to name a few liquidity risk, operational risk, market risk. Over all, it shows inefficiency of the managerial positions.

Conclusion

This study carried out research for 3 companies namely Indian Oil Corporation Limited, Bharat Petroleum Corporation Limited, Hindustan Petroleum Limited, The basic purpose of this research paper is in order to examine the relationships between the independent variables (Working Capital /Total Assets, Retained earnings/Total Assets, EBIT/Total Assets, Market value of equity/Total Liabilities, Sales/Total Assets and the dependent variable Z score in determining a company's Z values. Bharat petroleum Corporation limited is relatively good in z values than the Hindustan Petroleum & Indian Oil Corporation Limited, Apart from this relative difference method has been implemented in all the three companies.

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INVESTOR PERCEPTION ON THE USEFULNESS OF INTERIM FINANCIAL REPORTS IN INDIA: AN EMPIRICAL STUDY

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ABSTRACT

The main objective of financial reporting is to provide useful information to the investors for investment decisions making. Timely and reliable interim financial reporting plays an important role for stakeholders. This paper provides insight into the usefulness of interim financial reports and the perceptions of different type of Indian investors on the usefulness of these reports of listed Indian companies. The study uses the questionnaire survey method to gauge the different type of investor's perception on the use and usefulness of interim financial reports. The results demonstrate that investors perceive the items disclosed in the interim financial reports as important for their investment decision-making. The study found evidence that investors regard interim financial report as the 2nd most important financial information source after the annual reports. The findings show that Indian investors relied on interim reports to predict the forthcoming annual financial results and to evaluate management performance; however there is a disagreement with regards to the main purposes of interim financial reports among the different classes of investors. The net profit, earnings per share and turnover are the most important and useful disclosure items in the interim financial reports. The study concludes that the relative usefulness of interim financial reporting would depend on the different type of Indian investors. Lastly, the findings may be useful to interim reports preparers to perceive the importance of each disclosure item for the investors as well as to regulators in making regulations on interim financial reporting.

KEYWORDS: *Interim Financial Reports, JEL Classification: M40, M41, M49.*

Introduction

Interim financial reporting has become an important subject of financial reporting in India since 1988 when the amendments in Clause 41 of the listing agreement introduced the requirement of publishing unaudited half-yearly results with effect from March 1988 and publication of unaudited quarterly results with effect from June 1998 by companies listed on the Stock Exchange. The main objectives of interim financial reporting are to provide financial information to investors for investment decisions making, to minimize the investment risk for investors and to improve accountability and corporate governance among companies. The reliable and timely interim financial reporting enhances the ability of different stakeholders to understand corporate earnings, cash flows, liquidity and financial condition.

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In February 1998, the International Accounting Standards Board (IASB) issued an accounting standard IAS 34 for the first time on the international arena on Interim Financial Reporting to be effective from 1st January 1999 to provide the principles for recognition and measurement in the interim financial statements, to prescribe the minimum content of an interim financial report to enhance the interim financial disclosure. In India the Council of the Institute of Chartered Accountants of India has issued an accounting standard (AS 25) on Interim Financial Reporting comes into effect from 1st April 2002.

It is clear that there is general agreement that there is a need to improve the extent of disclosure information in interim financial reports. The review of the literature reveals that not much ink has been split on to gauge the investor's perception on use and usefulness of interim financial reporting. Most of survey based studies concentrated on annual financial reporting. This study focused on the examining the perceptions of Indian investors on the use and usefulness of interim financial reporting. It differs from most other studies because the views of various types of investors were observed with respect to their perceptions of using interim financial reports.

Based on the foregoing discussion, this study attempt to investigate the perceptions of Indian investors on the purpose and usefulness of interim reports and the usefulness of key information items disclosed in the interim reports. Now-a-days, it is more significant because it will highlight the important disclosure items that investors find most useful and this investigates could help various stakeholders such as preparers, users and regulators of interim financial reporting and companies concentrate on information that is of value to investors. As this is one of the first very few survey based studies that examine the purpose and usefulness of interim financial reporting perceived by Indian investors, it should make a significant contribution to the field of financial accounting in the country and will act as a basis for further studies on interim financial reporting.

Objectives of the Study

The main objectives of this study are:

- To gauge the perceptions of the various type of investors on the use and usefulness of interim financial reports in India.
- To gauge the perception of the different type of investors on the importance of different sources of financial information.
- To measure the importance and utility of key information items disclosed in the interim financial reports.
- To provide insights to preparers, users, researchers and regulators of interim report on interim financial disclosure in India.

Hypotheses of the Study

In this study the following hypotheses were developed and are disclosed in their null forms as follow:

- Investors perceive the interim financial reports useful and used as a basis for making investment decisions about a company.
- Investors perceive the disclosure of financial information in the interim reports as adequate and useful.
- There are no statistical significant differences among the different classes of investors with regards to their perception on usefulness of interim financial reports
- There are no statistical significant differences among the different type of investors with regards to their perception on the different sources of financial information.

- There are no statistical significant differences in the perceptions of different types of investors towards the relative importance and utility of items disclosed in interim financial reports.

Literature Review

The different scholars have conducted user surveys regarding the usefulness of interim financial reporting in the past. I have used their survey-based studies to review in this part.

Cerf (1961) observed that the interim report is one of the main sources of information. The other main source of information includes the annual financial reports, direct collection of information from management, and broker's or investor's studies on industries and corporations. Similarly, Taylor (1965) also reached the same conclusion when he gave top priority to the interim report while terming it to be a useful information source for financial analysts for investment purposes in his questionnaire survey in the United States of America. Newell (1969) conducted a study and found that 81% persons who were involved in financial analysis found the interim reports useful or very useful. Edwards et al. (1972) conducted interviews with financial analysts and investment executives and officials of financial institutions. The financial analyst and investment executive found that interim reports are very useful and required to see the expansion of interim reports such as annual reports. Lee and Tweedie (1975, 1981) observed that private shareholders and institutional investors gave utmost importance to interim reports while making decisions regarding investment.

Lunt (1982) in his study on respondents such as preparers, auditors, users and regulators showed the negative reactions towards quarterly reporting. The respondents were of opinion that quarterly reports were unreliable and cost too much. Day (1986) on the basis of his study reached to the conclusion that the investors were interested in greater interim disclosures to help them forecast annual earnings. The Institute of Chartered Accountants in Ireland's Financial Reporting Commission (1922) revealed the fact that some users were in favour of the quarterly publication of interim reports while others were interested in the publication of more formal half-yearly reporting. AICPA (1994) revealed that users were interested in knowing more interim segment reporting, and also in an interim statement of cash flow. Hussey and Wolfe (1994) conducted interviews in the UK with individual investors and found that individual investors gave little importance to the interim reports. Ku NorIzah and Zuaini (1995) also found that financial analysts given third place to interim reports in investment decision making. The first two were the annual financial reports and direct contacts with the corporate management. AL-Bogami (1996) found in his survey that the quarterly financial reports were used by most of the investors and helped them in making decisions but the contents of the interim reports were not helpful enough as users required more disclosure. Bartlett and Chandler (1997) observed in their survey in UK that 70% of the individual investors just read the interim reports but it could not be concluded whether it was useful or not.

Abdul Rahman (1998) in his survey found that for the financial analysts, interim reports were the third major source of information while the annual reports were the sixth. Barker (1998) found that for financial analysts the interim reports along with the annual report and direct contacts with companies were regarded as the most important source of information. Fund managers gave priority to their meetings with senior company management as compared to the interim reports.

Ku nor Izah and Chandler (2004) found the in Malaysia almost all companies published their reports near the deadlines. Ismail and Chandler (2005) observed that quarterly reports were used and useful but not the most sought-after sources of information. Musa Magena et al. (2007) in their survey found that both financial analysts and fund managers regarding the perception on interim reports about profit or loss in connection to disclosed items along with cash flow statement sections were of utmost importance. There were similarities in the response of financial analysis and fund managers with regard to the relative importance of items in the profit and loss account, balance sheet, cash flow statements and accounting policies and notes. However, significant differences were also noticeable between two groups with respect to information provided by the management. Md. Tofael Hossain Majumder et al. (2012) in their survey found that there was evidence regarding the fact that the interim financial reports are considered more useful than the annual reports. The investors also relied on interim financial reports to estimate the forthcoming annual results. The most important items among the items of disclosure in the quarterly financial reports were the earnings per share and current year prospects. The study concluded that the usefulness of quarterly financial reporting would depend on the different type of investors.

Methodology of the Study

- **Research Technique**

In this study a questionnaire survey method was used to obtain the perception of different types of investors on interim financial reports. Questions were designed to examine investors' perception on use and usefulness of interim financial reports for investment decision making about a company.

- **Sample Selection**

In developing a sample investors were classified into three groups as suggested by Edwards et al. (1972), viz., scanners, trackers, and sophisticates.

- **Scanners** are those investors who have a general interest in a particular company, make a cursory review of the interim period activities and warrant a reading of annual and interim reports for mental comparisons and evaluation.
- **Trackers** are those investors who would generally maintain a formal record of the financial activities and operating results of companies. Tracking is done on an interim basis and comparison between the forecast and actual results will be made.
- **Sophisticates** normally conduct an in-depth analysis of the operation of the firm. Users in this group will normally conduct a continuous analysis that requires substantial familiarity with the industry. Generally, the analysis will be followed by a written report, a recommendation or a decision, later to be used by other users. Thus, *sophisticates* has a large influence on the decisions made by other users.

This classification is important because it gives an indication of how intensive the analyses of interim reports are made by the users. Varying levels of analysis are anticipated to affect their attitudes towards interim financial reporting and will help answer the question of whether there are significant differences among the different classes of investors with regards to their perception on use and usefulness of interim financial reports.

- **Data Collection**

The study used primary data collected through questionnaire. The study measure investors perception based on a Likert scale of 1=strongly disagree, 2=disagree, 3=undecided, 4=agree and 5=strongly agree. The investors were first asked whether they use the interim financial reports for making decisions about a company. Investors who use the interim reports were asked to specify themselves either as scanners, trackers or sophisticates. A list of six objectives of interim financial reporting was presented in the questionnaire to examine the perception of Indian investors with regards to the use of interim financial reporting. Investors were asked to specify the extent, to which they agree with each of the six objectives of interim financial reporting. The next question evaluates usefulness of interim financial reports to investors. In this regard, this study examines the perceptions of users on the importance and utility of interim financial reporting and the significance of seven other sources of financial information in making their decisions. Next, this study provides perceptions of users towards the usefulness of each of the 17 key mandatory disclosure items in the interim financial reports selected based on the Listing Requirements and review of the literature. Users were asked to state their perceptions with regards to the utility of quarterly reporting using a Likert-scale. The means of the responses were calculated for different group of investors for each item. The mean scores act as a basis for comparison between the different group of investors and for ranking the usefulness of each information item.

The questionnaire was mailed to 216 different types of investors. In total 102 (47.22%) were returned and of these, 90 were fully completed and usable questionnaires, representing 41.67 per cent response rate. This response rate compares well with other similar studies.

Analysis and Findings

- **Profile of Investor Respondents**

The Distribution of respondents according to different type of investor is given in table 1.

Table 1: Distribution of Respondents According to Type of Investor

Type of Investor	Frequency	Percent
Scanners	25	27.78
Trackers	35	38.89
Sophisticated	30	33.33
Total	90	100

Of the 90 usable questionnaires completed by different types of active investors of interim financial reports, 25 (representing 27.78%) of them were scanners, 35 (38.89%) trackers and 30 (33.33%) sophisticates.

Perception of Investors on the Purpose of Interim Financial Reporting

Table 2 shows the ranking for six purposes of interim financial reports according to the three types of investors identified in the study. The purposes reflect how interim financial reports are used in making their investment decisions among investors.

Table 2: Uses of Interim Financial Reports According to Type of Investors

S. No.	Purpose of Interim Reporting	Scanners Mean (Rank)	Trackers Mean (Rank)	Sophisticated Mean (Rank)	Overall Mean (Rank)
1	To estimate the forthcoming annual result	3.28 (2)	3.14 (3)	3.56 (2)	3.33 (1)
2	To evaluate management performance	3.40 (1)	3.25 (2)	3.12 (4)	3.26 (2)
3	To provide the feedback information concerning financial performance for comparison with earlier expectations'	3 (4)	3.50 (1)	3.24 (3)	3.25 (3)
4	To predict results for beyond current annual period	2.84 (5)	3 (4)	3.60 (1)	3.15 (4)
5	To ascertain turning points in earning trend or liquidity	3.11 (3)	2.95 (5)	3.05 (5)	3.04 (5)
6	To determine the appropriate discount and growth rates for use in evaluating security prices	2.64 (6)	2.85 (6)	3 (6)	2.83 (6)

The results show that investors regard to estimate the forthcoming annual results as the main purpose of interim financial reports followed by evaluation of management performance and provide feedback information concerning financial performance for comparison with earlier expectations. The results also show that to forecast results for beyond current annual period and to ascertain turning points in earning trend or liquidity are important purposes of interim financial report because the average scores are greater than or equal to 3. The least important purpose of interim financial reporting is perceived to be 'to determine the appropriate discount and growth rates for use in evaluating security prices'.

The findings show that there is a disagreement among the different types of investors with regards to the main purposes of interim financial reports. Scanners believe that the main objective of interim financial report is to evaluate management performance; According to Trackers the main objective of interim financial reports is to provide the feedback information concerning financial performance for comparison with earlier expectations. Sophisticates believe that the main objective of the report is to predict results for beyond current annual period.

Sources of Financial Information and their Importance

Table 3 presents the findings on the use of interim financial reports in comparison with other sources of financial information known to be useful to users in making their investment decisions.

Table 3: Perception of the Importance of Different Sources of Financial Information according to the Type of Investors

S. No.	Sources of Information	Scanners Mean (Rank)	Trackers Mean (Rank)	Sophisticated Mean (Rank)	Overall Mean (Rank)
1	Annual report of companies	3.36 (2)	3.40 (1)	3.18 (3)	3.313 (1)
2	Interim financial reports of companies	3.39 (1)	3.25 (3)	2.95 (6)	3.197 (2)
3	Prospects of companies	3.30 (3)	3.12(4)	2.90 (7)	3.107 (3)
4	Stock broker advice and report	3.25 (4)	2.80 (7)	3.05 (5)	3.033 (4)
5	Corporate press release	2.40 (8)	3.28 (2)	3.14 (4)	2.94 (5)
6	Visit to companies	2.52 (6)	3.01 (5)	3.28 (1)	2.937 (6)
7	Communication with management	2.51 (7)	2.97 (6)	3.25 (2)	2.91 (7)
8	Information available on company webpage other than annual and interim reports	2.95 (5)	3.12 (4)	2.52 (8)	2.863 (8)

The results revealed that interim financial reporting is useful as a source of financial information to the users with the overall mean score of 3.197 and it is the second most important source of financial information. However, interim financial reporting is ranked as the first most important source of financial information by scanners, third by trackers and sixth by sophisticates. The mean scores revealed that the perceived usefulness of interim financial reporting would depend on how intensively an investor makes use of the interim reports. As the main users of interim financial reports (mean score of 3.39), scanners value interim financial reporting more than do the other users and it is useful to state that interim financial reports constitute the least important source of information to the sophisticates.

The findings show that users generally perceive annual reports to be more useful source of information than the interim financial reports. This appears to support the contention that interim financial reports are less useful than the annual reports because the former is more susceptible to random fluctuations incorporates seasonal elements and is not audited (Givoly and Ronen 1981). The average scores greater than or equal to 3 reveals that prospects of companies, stock broker advice and report are important source of information. The least overall important information source is communication with management and information available on company webpage other than annual and interim reports.

Usefulness of Items of Disclosure in the Interim Financial Reports

Users were asked to rate the usefulness of 17 key items of disclosure in the interim financial reports to evaluate the usefulness of each item of disclosure. Table 4 presents the investors perception of the utility of items of disclosure of financial information in order to the relevance of each items.

Table 4: Overall Perception of the Usefulness of Items of Disclosure

S. No.	Sources of Information	Scanners Mean (Rank)	Trackers Mean (Rank)	Sophisticated Mean (Rank)	Overall Mean (Rank)
1	Net profit	3.95(1)	3.85 (1)	3.56(1)	3.79 (1)
2	Turnover	3.71 (2)	3.80 (2)	3.21(7)	3.57 (2)
3	Earnings per share	3.35 (5)	3.75 (3)	3.50(2)	3.53 (3)
4	Net profit from ordinary activities	3.30 (6)	3.50(4)	3.42(3)	3.41 (4)
5	Issuances and repayment of debt and equity items	3.11 (9)	3.42(6)	3.32(5)	3.28 (5)
6	Interest expenses	3.25 (7)	3.50 (4)	3.05(11)	3.27 (6)
7	Amount and nature of extraordinary items	3.20 (8)	3.25 (7)	3.08 (10)	3.18 (7)
8	Review of performance	3.42 (4)	2.80 (13)	3.10 (9)	3.11 (8)
9	Current year prospects	3.50 (3)	2.65 (16)	3 (12)	3.05 (9)
10	Segmental information	3.05 (11)	2.90 (11)	3.15 (8)	3.03 (10)
11	Review of performance	2.71 (16)	2.95 (10)	3.40 (4)	3.02 (11)
12	Breakdown of borrowings	2.95 (13)	3.10 (8)	3(12)	3.017 (12)
13	Cash	2.69 (17)	3 (9)	3.25(6)	2.98 (13)
14	Amount and breakdown of long term liabilities	3.10 (10)	2.75 (14)	2.85 (16)	2.90 (14)
15	Amount and breakdown of current assets	3 (12)	2.85 (12)	2.82 (17)	2.89 (15)
16	Profit before tax, minority interest and extraordinary items	2.90 (14)	2.71(15)	2.95 (14)	2.85 (16)
17	Amount and breakdown of current liabilities	2.85 (15)	2.65 (16)	2.90(15)	2.80 (17)

The table shows that there seems to be little variation between the mean score of one item to the next item in the rank. In view of the utility of the disclosure items according to their overall mean scores net profit is the most useful item of financial disclosure in the interim financial reports followed by turnover, earnings per share, net profit from ordinary activities and issuances and repayment of debt and equity items. The least useful items of interim financial reports is amount of current liabilities followed by, profit before tax, minority interest and extraordinary items, amount of current assets, amount of long term liabilities and cash.

The findings show that there is a consensus among the different type of investors with regards to their perception of the most useful items while there is a disagreement with regards to the least useful items of interim financial reports. All the three types of investors perceive net profit as the most useful disclosure item in the interim financial reports. The least important items of disclosure to the scanners is cash while the trackers view current year prospects and amount of current liabilities as least useful; the sophisticates consider amount of current assets to be least consequential item in the interim financial reports.

Conclusion

It may be concluded from this study that information items disclosed in interim financial reports are useful and used by investors for their investment decision making process, but their usefulness based on their respective needs varies among different types of investors - scanners, trackers, and sophisticates. On the whole, investors regard interim financial report as the 2nd most important source of financial information. Annual reports appear to be more useful than interim financial report despite the fact that the latter is timelier. One explanation is that interim financial reports are not audited thus perceived to be less reliable and susceptible to income manipulation. The study reveals that pre-eminently; investors rely on interim financial reports to estimate the forthcoming annual results. The study provides evidence that net profit is the most important items to investors of all the items of disclosure in the interim financial reports. The results also indicate that there is a little consensus among the three groups of investors with regards to their perception of the relative usefulness of disclosure items of interim financial reports.

Lastly, the findings of this paper would also help preparers of interim reports to understand the importance and usefulness of each item of the financial information to the investors and to prepare interim reports according to the needs of the users. The study will open up avenues for further studies on interim financial reporting not only in India, but also in other countries where still lacks of empirical research in this area of study. This study will enhance the awareness of the various stakeholders towards interim financial reporting.

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ROBOT HUMAN INTERACTION: ROLE OF ARTIFICIAL INTELLIGENCE IN ACCOUNTING AND AUDITING

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ABSTRACT

'Artificial intelligence is growing up fast, as are robots whose facial expressions can elicit empathy and make your mirror neurons quiver.'

– Diane Ackerman.

Artificial intelligence is proving to be of great help to human kind in many fields. Coming to Accounting and Auditing it serves many purposes and increase accuracy and precisions of the final output. It can complement Human efforts in these fields, help disentangle ocean of Data's and help them focus on more relevant issues like problem solving, planning. It has made such a complex work easy and feasible in lesser time. The aim of this study is to examine the effect of artificial intelligence on the performance of accounting and auditing operations.

KEYWORDS: *Artificial Intelligence, Accounting, Auditing, Machine Learning.*

Introduction

In Today's Transforming world, Digitalisation makes the use of technology more fruitful. The idea of 4th Industrial Revolution is under constant scrutiny and discussions. It prepares platform where businesses can be fully digitalised, make use of robotics and use of Artificial intelligence in accounting and auditing. Audit firms have to assimilative Artificial learning for providing measures of risk aversion and cost savings to their clients. This new evolution can be called as AI facilitated audit. This has changed the style of accounting from paper work into computerised format. To put forward simply, AI has made processing of mammoth size data easier and faster. It definitely beats human capacity in this case. It reduces efforts made in accounting works like review of journal entries, readings of contracts, making legality of financial accounts in a given manner. It also provides a mechanism for comprehend ledgers; recognise wrong statements and any risk related reports. The 'Association of Charted Certified Accountant' shows how machine learning techniques have challenges the progress report of deskilling of accountant operations.

Motive of the Study

To study the importance of artificial learning in accounting and auditing areas and measure the decree of forthcomings regarding artificial intelligence in accounting.

Research Methodology

- Type of Research: Descriptive/Expressive Research
- Type of Data Source used: Secondary Data/Data source.

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The data has been extracted from various sources like research articles, publications, accounting websites, Articles, essay from Newspapers, Magazines and Journals from the various web-sites which deals directly or indirectly with Artificial intelligence. Descriptive research was chosen for developing a better understanding in profundity.

Limitation of the Study

The study relies on published data and information. No primary data is being collected. Secondary data may be lacking in accuracy, or they may not be completely current or dependable.

Research Questions

The research questions are as follows:

- How accounting functions and firm's performances can be measured through AI?
- How the auditor who lacks in AI accomplishments, skill and detraining the data, adept in AI methods and techniques.

Artificial Intelligence

"Nils J. Nilsson separates AI into its components: Artificial (machine, as opposed to human) + intelligence. In order to gauge the intelligence of an entity, Nilsson falls back on the Turing Test. Moreover, he believes that with increased complexity of the machine comes increased intelligence".

The word "Artificial Intelligence" was coined by John McCarthy. It is an experimental part of computer science where it expels the diverse use of machines. There are different activities that computers can perform using AI techniques can be recognition of speech, attainments in auditing, structural planning and judicious tasks.

The 4th Industrial Revolution

At the age of 1950s the 1st project regarding AI was performed and made efforts to find the equality between the capacity and intelligence of robots and humans. From the past 60 years the advancements in machine learning comprehend the exclusive use at large but not fully reinstate the actual refinement of Human judgments'. In his book, "The Fourth Industrial Revolution," founder and executive chairman of the World Economic Forum, Klaus Schwab, states that "Data is becoming as valuable as oil and metal". The book references a survey that finds that one of the upcoming technological shifts will occur when 30% of corporate audits will be conducted by AI, which 75% of respondents expect to happen by the year 2025.

Major Impacts of AI in Accounting and Auditing Tasks

- **Accounting Tasks which AI Performs**

As AI gives a platform for accounting firms to explore and grasp the latest technology driven aspects. Some of the useful accounting tasks AI performs are listed below:

  - It helps companies by obtaining, consolidating and merging data from different and numerous sources. This saves their time and helps them to plan their goals effectively.
  - AI helps in searching and accessing digital files easily. Now this increases the precisions of the auditing done as a firm's financial transactions can be looked upon easily.
  - It can review receipts, expenses and identify if there is any breach of accounting policies and procedures.
  - It helps resolve queries of the consumers and keep track their account balance, pending bills etc.

- **AI Based Auditing**

Interrogating the Auditing functions through AI can decreases the mammoth size of work from both client and company sides. In auditing the analysis of ledger or financial reports or any manual efforts that can be minimize by AI and auditors are able to provide a better context than before. Auditor can gather the useful data with machine learning for identifying the repercussions and praiseworthy aspects related accounting terms and risk solving factors.

Role of AI in Accounting Area

To put efforts regarding the betterment of accounting, accountants and stakeholders should apply their technical knowledge and must have information about financial and non financial transactions in best quality. AI interprets the role of accountants as to check the financial position of a company and helps to make decision in precise way. For example giving database in cost effective manner, producing new techniques for analysis and saves time so that focus can be shifted from manual accounting tasks to decision making, building relationships and tackle problem.

Public Accounting Firms - Investing Large Amounts in Machine Learning

"Jon Raphael", the chief innovation officer at Deloitte Touche Tohmatsu Limited (Deloitte), states that, with the effective implementation of cognitive technologies, the audit process will become ''smarter, more insightful, and more efficient. This is the future of the audit profession, and the users of financial statements deserve it'' (Raphael 2015).

Deloitte is collaborating with Kira Systems Inc., also put forward the importance of AI in the field of accounting and under this contract it creates cognitive models for extracting the information and would be use for better analysis and helps auditors' review documents easily.

DeNovo AI techniques are used by price water house coopers for evaluation the future use of financial technology for helping analyst and clients. (MIT Technology review 2016).

Experts' Reviews

Li Deng**,** chief AI officer, Citadel: "There are a few factors that really propelled AI to this current state-what many people call "the third wave." The first wave died because people were probably too naive. They overestimated the future. And at that time, of course, even into the second wave, the computing power wasn't there, and there wasn't even the concept of big data. So when AI evolved, maybe 20 years ago, into something called machine learning, where data became the key to AI that was a big advancement-people understood the importance of data".

Rajat Monga**,** engineering director, Tensor Flow, Google*:* "AI is going to be part of nearly every application we have around us. It's going to be part and parcel of everything we do, just like the Internet has changed things".

Impact upon Workforce

In 2015, University of Oxford research shows that AI replaces the role of accountants as it was found a 95 percent change of losing jobs related to accounting as machines plays a superior role behind these tasks. This report also found that some jobs are eliminated but others are created because of progression of technology. As a result, this is not surprising for making concern regarding automation in auditing as it creates productivity and driving overall cost down. (Pacific Standard 2015).

Conclusion

Artificial Intelligence is in a hot spot these days. Countries are taking it seriously and of course for the right reasons. AI paves way for a better and conducive environment in the field of accounting and auditing. Development in the field of AI can definitely be a great help to human efforts. Adoption of AI should be embraced and efforts to increase its potential can do wonders in such field workload is huge and include ocean of data.

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IMPACT OF STOCK SPLIT ON SHORT-TERM LIQUIDITY OF STOCKS IN EX-SPLIT PERIOD: EVIDENCE FROM INDIAN STOCK MARKET

Dr. Pradipta Banerjee*

ABSTRACT

In contrast to theoretical explanation that no direct consequence either from the view point of the splitting firm or its shareholders, stock markets have found to react optimistically worldwide on announcement and execution of splits. In order to justify such observed market reaction various explanations have emerged over time in the literature of finance among which the major and widely-accepted explanations are the information signaling and trading range or liquidity hypothesis. The advocates of liquidity hypothesis states that firms splits their stocks to realign their stock prices which have increased substantially to a lower and more favourable trading range to make the stocks attractive and affordable to small and wealth-constrained investors and hence to enhance liquidity of their stocks. But, as empirical evidence is mixed on liquidity effect of split with documented improvement as well as reduction or no change in post-split liquidity both in the context of stock markets of different countries abroad and in the context of Indian stock market, present study has made a modest attempt to examine the validity of liquidity hypotheses of stock split in Indian stock market by analysing changes in trading volume and number of trades following ex-split day using daily data for one month before and after the split for a sample of splits occurred during more than seventeen years in Indian stock market. Empirical findings of the study demonstrate that split leads to improvements in post-split liquidity in the month following split lending support to the most of the earlier studies conducted in Indian context and indirectly imply that splits make the stocks more attractive to small and retail investors in the market.

KEYWORDS: *Stock Split, Liquidity Hypothesis, Trading Volume, Split Ex-day.*

Introduction

Theoretically stock split is not associated with any direct consequence either from the view point of the splitting firm or from the view point of the shareholders of the splitting firm. A split though increases the number of outstanding shares and decreases the par value of each share proportionately with the split factor; total share capital and capital structure of the firm, value of share-holdings of shareholders and their proportionate ownership in the firm remain unaltered after the split. Still, it has been observed and documented in a large number of studies that stock markets react optimistically worldwide on and surrounding announcement and execution of splits. In order to justify such observed market reaction various explanations have emerged over time in the literature of finance among which the major and widely-

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accepted explanations are the information signaling [proposed by Fama, Fisher, Jensen and Roll (1969)] and trading range or liquidity hypothesis [proposed by Copeland (1979)] along with others like, change in underlying characteristics of return distribution (i.e., return volatility), change in ownership composition, attention getting device, optimal tick-size, bid-ask spread and transaction cost, tax-option value of stock, etc.

The signalling hypothesis states that by splitting their stocks, firms try to convey favourable private information about stability of past performances and superior future performances of the firms. On the other hand, advocates of liquidity hypothesis of stock split believe that firms often undertake splits to realign their stock prices which have increased substantially and significantly to a lower and more favourable trading range that are comparable with other similar firms in the industry and market averages to make the stocks attractive and affordable to small and wealth-constrained investors, which in turn helps to increase the number of investors, trading volume and hence liquidity of the stock. Again, signalling and liquidity hypotheses are interrelated. If the firms posses any unfavourable information about their firms, they are most likely to not going for split even when the stock prices are too high because they anticipate that the stock prices will return to the normal range anyway when the unfavourable information is disseminated in the market. Similarly, if the firms do not have any explicit desire to signal and undertake split only to bring down the stock prices to a lower and better trading range, the rational investors are most likely to interpret the split as the signalling of favourable information about the firms.

As, in case of our country, stock split has a history of mere two decades where it was introduced in the year 1999, the number of existing studies on the split in Indian context is also not plenty and most of such studies have examined market reaction associated with announcement or/and execution of stock splits. Again empirical evidence on liquidity effect of split is mixed with some studies showing improvement in post-split liquidity while some others showing reduction or no change in liquidity following split.Moreover, impact of any price-sensitive corporate event may not be identical in different markets and different time period. For all these, in the present study, a modest attempt has been made to examine the validity of liquidity hypotheses of stock split in Indian stock market by analysing changes in liquidity following ex-split day using daily data for one month before and after the split.

Review of Existing Literature on Liquidity Effect of Stock Split

Empirical studies examining liquidity effect of stock split conducted in the context of various stock markets abroad as well as in context of Indian stock market have documented mixed evidence. The majority of the studies on liquidity effect of stock split undertaken abroad have observed that liquidity of stocks has improved in post-split period [Ohlson and Penman (1985), Amihud and Mendelson (1986), Dravid (1987), Lakonishok and Lev (1987), Lamoureux and Poon (1987), Conroy et al. (1990), McNichols and Dravid (1990), Dubofsky (1991), Maloney and Mulherin (1992), Ikenberry et al. (1996), Muscarella and Vetsuypens (1996), Angel (1997), Mukherji et al. (1997), Desai et al. (1998), Schultz (2000), Dennis and Strickland (2003), Reboredo (2003) and many others] while some others have documented adverse or no effect of split on liquidity of stocks [Copeland (1979), Murray (1985), Defeo and Jain (1989), Dravid (1989), Conroy et al. (1990), Gray (1990), Arnold and Lipson (1997), Gray et al. (1999), Lipson (1999), Easley et al. (2001), Goyenko et al. (2005), etc.]. The empirical evidence on liquidity effect of stock split is also mixed for our country with majority of studies documenting improvement of liquidity in post-split period [Lukose PJ and Rao (2002), Dash and Gouda (2007), Gupta and Gupta (2007), Mishra (2007), Pavabutr and Sirodom (2008),Joshipura (2009), Alex et al. (2011), Ray (2011), Chakraborty(2012), Pooja (2013), Thirunellai (2014), etc.] while some others reporting reduction or no change in liquidity following splits [Choudhary and Chaudhary (2009), Joshipura (2013), Rajesh (2013), etc.].

Trading range or liquidity hypothesis is also supported by survey-based studies both from India [Mehta et al. (2011)] and abroad [Dolley (1933), Baker and Gallagher (1980), Baker and Powell (1993), Baker et al. (1995), Schultz (1997), etc.]. The survey evidences on managers' motives behind splits reveal that a vast majority of respondents regard stock split as a useful tool to lower stock prices, broaden the ownership base and improve marketability and liquidity of stocks by making the stocks attractive to small and retail investors.

Objectives of the Study

The present study has been undertaken to investigate empirically the impact of stock split on short-term liquidity of stock. More specifically, the objectives of the present study are:

- To examine changes in daily trading volume of sample stocks in the post-split period; and
- To examine changes in daily number of trades of sample stocks in the post-split period.

Data Base and Methodology

Initially, all the 1106 splits executed by BSE listed companies during the period from introduction of split in Indian stock market (i.e., 14th June, 1999) to 31st March, 2017 have been identified from 'Capitaline' and 'Prowess' database packages. Thereafter, the firms which announced any other price-sensitive corporate events, like, earnings announcement, dividend announcement, announcement of bonus issue, right issue, buy back of shares, merger, acquisition, etc. within one month before and one month after the ex-split date, for which daily data on trading volume and number of trades for one month before and after split were not available and for which ex-split date could not be identified have been excluded from the initially identified firms which reduced the number of split to 572 representing 26 broad industries of the economy. A sample of 30 splits (as it is considered as a large sample in statistical sense and its sampling distribution of sample mean approximately follows normal distribution [Stutely (2003); Saunders et al., (2011)]) has been chosen thereafter from 572 splits by selecting one split from each industry and remaining 4 from the rest using simple random sampling without replacement method of sampling to make the sample representative of all the industries of the economy. All the required data for the sample firms like, ex-split date (the date on and from which split becomes effective and spitted stock is traded on split-adjusted reduced prices), daily data on trading volume and number of trades have been collected primarily from 'Capitaline' and 'Prowess' database packages.

Liquidity means the ease of converting any asset into cash at minimal loss. There are a number of parameters for measuring liquidity of stocks like, number of shareholders, trading volume, number of trades, average volume per trade, bid-ask spread, time required to transact, depth, breadth and resiliency, transaction cost, etc. among which the most important determinant of liquidity of stocks in the secondary market is the number of shareholders. Again, a number of empirical studies [Demsetz (1968), Copeland (1979), Lamoureux and Poon (1987), etc.] have documented that the number of transactions/trades per unit of time and traded volume (i.e., the number of shares transacted) are positively correlated with the number of shareholders. Besides, a large number of empirical studies conducted in the context of stock markets abroad [Copeland (1979), Lakonishok and Lev (1987), Desai et al. (1998), Liu (2000), Elfakhani and Lung (2003), Elliott and Warr (2003), Jog and Zhu (2004), Leung et al. (2005), etc. to name a few] as well as almost all the studies in India have used trading volume or/and number of trades or their variants like, average volume per trade, market volume ratio, relative volume, etc. as the measures of liquidity.

For these reasons, two measures of liquidity namely, trading volume and number of trades have been considered for the study to analyse liquidity effect of stock split. In order to examine the short-term liquidity effect of split, the behavior of trading volumes and number of trades for 30 trading days following the split execution date has been compared with those for 30 days preceding the split execution date. For that purpose, trading volume of the first trading day (day +1) in the post-split period (i.e., on execution day) has been matched with trading volume of the last day in the pre-split period (day -1), trading volume of day immediately following the day +1 (day +2) has been matched with that of the day immediately preceding the day -1 (day-2) and trading volumes of all other days in the post-split period until day +30 have been matched with those of pre-split period in similar manner. For the measure number of trades, the similar procedures have been followed. Thus, for the purpose of comparison, 30 pairs of observations have been considered for each of the liquidity measures. As the number of outstanding shares increase proportionately with the split factor (i.e., number of shares outstanding after the split/number of shares outstanding before the split) in the post-split period, the post-split trading volumes have been adjusted by dividing the daily trading volumes by the respective split factors to make the pre and post-split trading volume comparable.

Statistical significance of differences between the pre-split and post-split liquidity measures have been tested by performing paired-t tests. But, as we have observed from the results of Kolmogorov-Smirnov tests that distributions of trading volumes as well as number of trades deviate significantly from normality (results are not reported here), we have also applied a non-parametric Wilcoxon signed-rank test to arrive at conclusive inference on the liquidity effect associated with stock split. While applying the matched pair tests, change has been defined as the post-split minus pre-split for each measure and hence a positive change implies increase in post-split period and negative change indicates the opposite.

Analysis and Discussion

The results of paired-t test for differences between the pre-split and post-split trading volumes for each sample firm taking 30 trading days from each period are presented in Table-1 which shows the values of test statistic along with other descriptive statistics of the variables concerned. From Table-1 it is observed that out of the total 30 sample firms, difference between pre and post-split trading volumes are statistically significant for 25 (83.33%) firms. Among the 25 significant differences, 19 (63.33%) differences are positive implying that trading volumes of shares of 63.33% of the spitted firms have increased significantly while those have decreased for 5 (16.67%) firms in the post split period. No significant difference is observed for 6 (20%) firms which indicates that there is no effect of split on trading volume and hence on liquidity for those spitted stocks. Thus, the results document that for majority of the sample firms liquidity of shares as measured by trading volume of shares has enhanced significantly after the splits and it has worsen or remained unchanged only for 16.67% and 20% of the sample firms respectively. But, as the distribution of daily trading volume deviates significantly from the properties of normal distribution, we have verified the significance of observed differences by employing non-parametric Wilcoxon signed-rank test, the results of which are summarised in Table-2. It is evident from Table-2 that the results of non-parametric test are in agreement with the parametric test in all major aspects. Daily trading volume of shares has increased significantly in the post-split period for 17 (56.67%) sample firms which are slightly (only 2) less than that found by parametric test. It is also evident that almost all the sample firms for which significant improvements in trading volumes have been observed, have very high proportion of positive differences in the 30 pairs of comparison. The average trading volumes have decreased significantly for 5 (16.67%) firms (also found the same by the previous test) while remained unchanged for 8 (26.67%) firms (only 2 more than that found in previous test). Thus, there exist a favourable impact of stock split on trading volume of shares and hence on liquidity of stock in short-term period of 30 trading days following ex-split date.

Table 3 presents the results of paired-t test concerning changes in number of trades in the post-split period compared to pre-split period of 30 trading days for each of the sample firms from which it is observed that the number of trades has increased significantly in the post-split period for 19 (63.33%) sample firms rejecting the null hypothesis of equal mean number of trades in pre and post-split periods at high level of significances (barring a few, all are significant at 1% level). Among the 30 sample firms, number of trades has decreased for 4 firms in the post-split month which constituting only 13.33% of the total sample firms. For 7 (23.33%) sample firms, however, no significant change in the number of trades in the post-split month has been observed indicating that there is no influence, either favourable or adverse, of stock split on trading frequency of these spitted stocks in the post-split month. Thus, like trading volume, the number of trades on the spitted shares has also increased significantly for majority of the sample firms providing additional support for short-term improvement in liquidity of shares in the post-split month. Like daily trading volume, the Kolmogorov-Smirnov test rejects the normality of daily number of trades series and hence we have conducted Wilcoxon signed-rank test additionally to verify the significance of observed behavior of number of trades around the ex-split date, the results of which are presented in Table-4. From Table-4, it is seen that the non-parametric Wilcoxon signed-rank test, like parametric test, also strongly documents significant increase in number of trades after the splits for majority of the spitted firms. The number of trades has increased significantly for 60% (18) of the sample firms in the post-split period of 30 days compared to matched 30 days in the pre-split period. The number of trades has declined after the splits for only 4 firms constituting only 13.33% of total sample firms while for 8 (26.67%) sample firms no significant change between the pre-split and post-split number of trades has been observed. Thus, regarding changes in number of trades following splits, the findings demonstrate that splits lead to significant increase in daily number of trades of the spitted firms after the splits.

Conclusion

Empirical findings of the study document that for majority of sample firms stock split leads to improvements in post-split liquidity in the month following split as measured by most commonly used measures of liquidity, namely daily trading volume and daily number of trades. The findings, thus, lend support to the well-documented liquidity hypothesis of stock split in Indian context as well as to the findings of most of the earlier studies conducted in the context of stock market of our country The observed increased number of trades for the spitted stocks in the post-split period also indirectly indicates that splits make the stocks more attractive to small and retail investors who generally trade in a small quantities compared to institutional investors.

Table 1: Results of Paired-t Test for Short-Term Changes in Trading Volume following Splits

Sample Firm	Post-split Average Trading Volume	Pre-split Average Trading Volume	Mean of Paired Differences	Standard Error of Mean of Paired Differences	Degrees of Freedom	t-statistic
1	77575.13	117470.80	-39895.70	11820.15	29	-3.375*
2	148521.80	71121.33	77400.43	18871.39	29	4.101*
3	158475.2	74163.37	84311.83	44688.72	29	1.887***
4	387776.60	452470.70	-64694.10	48042.84	29	-1.347
5	17295.64	9231	8064.64	3524.08	29	2.288**
6	742.51	232.50	510.01	136.37	29	3.740*
7	205892.70	277181.20	-71288.50	15503.79	29	-4.598*
8	1728.89	109.20	1619.69	831.37	29	1.948***
9	3059	2072.40	986.60	575.94	29	1.713***

10	16556.58	7339.37	9217.227	5374.35	29	1.715***
11	4391.17	214.83	4176.33	1974.56	29	2.115**
12	1921.28	1645.20	276.08	965.15	29	0.286
13	7951.89	2223.93	5727.95	3242.96	29	1.766***
14	7127.25	5100.77	2026.48	754.06	29	2.687*
15	231083.50	280533.70	-49450.20	35000.90	29	-1.413
16	1675.13	192.27	1482.87	656.35	29	2.259**
17	4314.89	682.23	3632.65	1684.84	29	2.156**
18	78.06	31.70	46.36	17.36	29	2.670**
19	355.27	1038.90	-683.63	181.00	29	-3.777*
20	3872.81	1970.07	1902.75	1067.20	29	1.783***
21	38968.73	9848.20	29120.53	16598.47	29	1.754***
22	18008.25	17211.03	797.22	3722.83	29	0.214
23	5606.42	12732.50	-7126.08	4776.44	29	-1.492
24	304.25	73.170	231.09	134.098	29	1.723***
25	1971.12	616.80	1354.32	513.04	29	2.640**
26	456.40	592.27	-135.87	111.05	29	-1.224
27	22146.66	10216.23	11930.43	3947.35	29	3.022*
28	49144.83	289983.60	-240839	72177.80	29	-3.337*
29	8681.55	3519.40	5162.15	2747.34	29	1.879***
30	6520.33	14249.60	-7729.27	3888.86	29	-1.988***

Note: *, ** and *** imply significance at 1%, 5% and 10% levels respectively.

Table 2: Results of Wilcoxon Signed-rank Test for Short-term Changes in Trading Volume following Splits

Sample Firm	No of Pairs	No. of Positive Differences (Post – Pre)	No. of Negative Differences (Post - Pre)	No. of Ties	Standardized z-statistic	Acceptance /Rejection of Null Hypothesis
1	30	8	22	0	-2.910*	Rejected
2	30	25	5	0	3.754*	Rejected
3	30	24	6	0	3.219*	Rejected
4	30	12	18	0	-1.286	Accepted
5	30	22	8	0	2.437**	Rejected
6	30	24	6	0	3.322*	Rejected
7	30	5	25	0	-3.610*	Rejected
8	30	28	1	1	4.682*	Rejected
9	30	19	11	0	1.748***	Rejected
10	30	22	8	0	3.096*	Rejected
11	30	22	8	0	3.363*	Rejected
12	30	14	16	0	0.051	Accepted
13	30	23	7	0	3.240*	Rejected
14	30	21	9	0	2.705*	Rejected
15	30	9	21	0	-1.491	Accepted
16	30	20	9	1	2.173**	Rejected
17	30	17	13	0	1.224	Accepted
18	30	22	7	1	3.082*	Rejected
19	30	10	20	0	-2.581*	Rejected
20	30	16	14	0	0.710	Accepted

21	30	29	1	0	4.762*	Rejected
22	30	17	13	0	0.792	Accepted
23	30	7	23	0	-2.314**	Rejected
24	30	20	10	0	2.232**	Rejected
25	30	19	11	0	2.386**	Rejected
26	30	14	16	0	-0.854	Accepted
27	30	20	10	0	2.828*	Rejected
28	30	3	27	0	-4.042*	Rejected
29	30	26	4	0	3.075*	Rejected
30	30	13	17	0	-1.532	Accepted

Notes: *, ** and *** indicate significance at 1%, 5% and 10% levels respectively.

Null Hypothesis of Median Difference between Post and Pre-split trading volume equals to zero.

Table 3: Results of Paired-t Test for Short-term Changes in Number of Trades following Splits

Sample Firm	Post-split Average Trading Volume	Pre-split Average Trading Volume	Mean of Paired Differences	Standard Error of Mean of Paired Differences	Degrees of Freedom	t-statistic
1	7630.23	6313.57	1316.67	905.71	29	1.454
2	2312.80	865.10	1447.70	230.40	29	6.283*
3	1387.33	893.47	493.87	180.38	29	2.738*
4	18147.87	11199.70	6948.17	1627.53	29	4.269*
5	1564.60	374.37	1190.23	241.95	29	4.919*
6	22.27	2.50	19.77	3.92	29	5.049*
7	884.73	859.17	25.57	64.46	29	0.397
8	11.53	7.57	3.97	2.53	29	1.567
9	31.00	18.23	12.77	5.34	29	2.390**
10	131.10	134.47	-3.37	24.06	29	-0.140
11	29.47	11.00	18.47	5.92	29	3.118*
12	4.03	13.57	-9.53	4.79	29	-1.991***
13	90.07	46.93	43.13	23.55	29	1.831***
14	142.20	76.40	65.80	16.42	29	4.007*
15	14183.87	16405.53	-2221.67	1286.94	29	-1.726***
16	6.03	2.93	3.10	1.02	29	3.047*
17	43.17	6.87	36.30	8.64	29	4.199*
18	7.33	1.77	5.57	2.03	29	2.738*
19	21.83	31.73	-9.90	8.97	29	-1.104
20	27.97	10.63	17.33	3.68	29	4.715*
21	470.27	183.80	286.47	36.40	29	7.869*
22	197.67	34.73	162.93	12.35	29	13.191*
23	199.63	687.17	-487.53	135.66	29	-3.594*
24	20.90	9.37	11.53	5.95	29	1.939***
25	15.30	4.20	11.10	3.10	29	3.586*
26	26.50	19.17	7.33	4.23	29	1.736***
27	1348.33	443.63	904.70	184.39	29	4.907*
28	65.33	370.43	-305.10	59.85	29	-5.098*
29	3.93	8.53	-4.60	4.08	29	-1.126
30	47.63	39.27	8.37	10.30	29	0.812

Note: *, ** and *** mean significance at 1%, 5% and 10% levels respectively.

Table 4: Results of Wilcoxon Signed-rank test for Short-term Changes in Number of Trades following Splits

Sample Firm	No of Pairs	No. of Positive Differences (Post – Pre)	No. of Negative Differences (Post - Pre)	No. of Ties	Standardised z-statistic	Acceptance /Rejection of Null Hypothesis
1	30	16	14	0	1.162	Accepted
2	30	29	1	0	4.576*	Rejected
3	30	22	8	0	3.096*	Rejected
4	30	23	7	0	3.507*	Rejected
5	30	28	2	0	4.679*	Rejected
6	30	25	1	4	4.420*	Rejected
7	30	14	16	0	-0.247	Accepted
8	30	16	13	1	1.590	Accepted
9	30	18	11	1	2.066**	Rejected
10	30	15	15	0	-0.596	Accepted
11	30	22	7	1	3.125*	Rejected
12	30	8	19	3	-1.925***	Rejected
13	30	18	12	0	1.471	Accepted
14	30	22	8	0	3.343*	Rejected
15	30	9	21	0	-2.170**	Rejected
16	30	20	7	3	2.798*	Rejected
17	30	26	4	0	4.021*	Rejected
18	30	22	4	4	3.303*	Rejected
19	30	13	17	0	-0.288	Accepted
20	30	22	5	3	3.929*	Rejected
21	30	28	2	0	4.700*	Rejected
22	30	30	0	0	4.782*	Rejected
23	30	5	25	0	-4.247*	Rejected
24	30	18	10	2	2.107**	Rejected
25	30	22	5	3	3.715*	Rejected
26	30	18	11	1	1.644***	Rejected
27	30	26	4	0	4.247*	Rejected
28	30	2	28	0	-4.474*	Rejected
29	30	13	12	5	-0.633	Accepted
30	30	14	15	1	0.973	Accepted

Notes: *, ** and *** indicate significance at 1%, 5% and 10% levels respectively.

Null Hypothesis of Median Difference between Post and Pre-split number of trades equals to zero.

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DOES CORPORATE REPORTING UNDER IFRS IMPACT GLOBAL CAPITAL MOBILIZATION?: A CASE STUDY OF DR. REDDY'S LABORATORIES LIMITED

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ABSTRACT

In the era of globalisation, the companies are now a days trying to access global markets for mobilising the capital needed for starting and expanding the business. The role of accounting becomes important in this situation, which will enable the investors across the globe to take informed decisions regarding their investment. Since different countries use different accounting standards, the investors would face difficulties in making comparisons between the financial statements prepared by the companies across different countries. In the event of adoption of IFRS by the companies, it would be imperative to understand the impact of IFRS on the preparation and presentation of various financial reports and its incidence on various dimensions of accounting. The Pharmaceutical Industry in India is the worlds third-largest in terms of volume and lot of money is spent in research and development of various drugs, vaccines and accounting for such expenditure is to be dealt with in the light of IFRS. This paper explains the expert's opinion on importance of IFRS in corporate reporting and analyzes the impact of IFRS adoption on global capital mobilization.

KEYWORDS: *Globalisation, Accounting Standards, IFRS, Global Capital Mobilization.*

Introduction

In the wake of globalisation, the role of corporate reporting becomes very important in promoting the growth and development of a country's business and economy. Thus investors expect all relevant information about the company they invest and the companies shall provide all information and enable the investors to measure the performance of companies in a better way. Since different countries use different accounting standards, the investors would face difficulties in making comparisons between the financial statements prepared by the companies across different countries. In 1973, the International Accounting Standards Committee (IASC) was formed in England with a view to issue accounting standards which shall be followed globally. IFRS have been developed to harmonize the accounting standards worldwide, whereas at present more than 100 countries in the world have adopted International Financial Reporting Standards. Recent decades have experienced lot of changes in the area of accounting and the companies accessing the global markets for capital needs have started reporting globally and adopted IFRS voluntarily.

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This paper is written on the basis of Ph.D research work done under the supervision of Prof. K.V. Achalapathi, Former Dean, Faculty of Commerce, Osmania University, Hyderabad, Telangana State, India

In the event of adoption of IFRS by the companies, it would be imperative to understand the impact of IFRS on the preparation and presentation of various financial reports and its incidence on various dimensions of accounting. Adoption of IFRS invariably boosts investors' confidence and attract cross border financial transactions which is the basis for economic growth[1]. The Pharmaceutical Industry in India is the world's third-largest in terms of volume. The number of purely Indian pharmaceutical companies is fairly low. Dr. Reddy's Laboratories founded by Dr. K. Anji Reddy is an Indian multinational company. During the year 2001, the company issued American Depository Receipts for the first time and got listed on the New York Stock Exchange. As the pharmaceutical industry is research oriented one, lot of money is spent in research and development of various drugs, vaccines and accounting for such expenditure is to be dealt in the light of IFRS.

Review of Literature

The following research thesis and articles were found to be useful for the paper:

Antehunegn Yihenew[2] in his Ph D research "International Financial accounting Problems faced by Industries in Implementing IFRS" found that it is real that the globe needs similar accounting standard and this standard is IFRS, it is also real that this standard needs high level and qualified expertise to take a smooth move towards IFRS.

Rishi Bhargav Das[3] in his research article "International Financial Reporting Standard: A New Dimension in the Area of Financial Reporting in India" revealed that with the growth of Indian economy and increasing integration with the global economies, Indian corporate are raising capital globally and the fair financial reporting with the help of IFRS will enable the corporate to grow.

Srinivasa Rao K and Malyadri[4] in their research article "International Financial Reporting Standards: A Frame Work" concluded that IFRS adoption improves the functioning of global capital markets by providing comparable and high-quality information to investors. In this connection corporate have to disclose the realities of their business activities and professionals in turn to interpret and report as per the standards without any violations.

Ramona Lapteş and Ioana Sofian[5] in their research "A new dimension of the entities' financial reporting: Integrated Reporting" summarised that transparency, the openness of a company, is, in fact, an attempt to a collateral global awareness of the moral obligation of each one of us to transmit the respect of values and of a better world to future generations.

Objectives

- To examine expert's opinion on significance of corporate reporting under IFRS
- To analyze the trends in foreign institutional investors after adoption of IFRS in Dr. Reddy's Laboratories Limited

Data Collection

The paper is based on both primary and secondary data. The primary data is collected from the stakeholders of pharmaceutical industry viz., Auditors and Investors. The sample size comprised of 200 auditors and 200 investors in Hyderabad city of Telangana state. The secondary data is collected from the annual reports of Dr. Reddy's Laboratories Limited for the years 2008-09 to 2016-17.

Expert's Opinion on Significance of IFRS

In the recent past there is a lot of change in the process of financial reporting by firms across the globe. For an investor from the outside country or continent, it is difficult to understand the financial statements prepared by an entity which is not situated in his hometown as different companies may follow different accounting standards while preparing the financial statements. IFRS are supposed to play the role of global accounting language and the implementation of IFRS necessitate the in-depth study as to how the IFRS are going to meet the requirement of presenting the true and fair view of the financial statements. The significance of IFRS in corporate reporting process has gained importance due to the qualitative attribute of the financial statements provided by the firms. It is presumed that IFRS helps for better and quality reporting. The statement was verified with the help of responses from the stakeholders of pharmaceutical industry. The following tables provide an analysis of the statement on the basis of the profession of the respondents.

Table 1: IFRS and Quality Reporting - Auditor's Opinion

Profession	Response	No. of Respondents	Percent
Auditor	Strongly Disagree	1	0.5
	Disagree	4	2.0
	No Opinion	21	10.5
	Agree	105	52.5
	Strongly Agree	69	34.5
	Total	**200**	**100**

Source: Primary data

The process of implementation of IFRS has become prominent due to the increasing importance of qualitative phenomenon of the financial statements. It is evident from table 1 that 87 percent of the auditors agree that IFRS helps better and quality reporting.

Table 2: IFRS and Quality Reporting – Investor's Opinion

Profession	Response	No. of Respondents	Percent
Investor	Strongly Disagree	5	2.5
	Disagree	10	5.0
	No Opinion	30	15.0
	Agree	74	37.0
	Strongly Agree	81	40.5
	Total	**200**	**100**

Source: Primary data

The responses taken from the investors tabulated in table 2 clearly show that 77.5 percent of investors agree that IFRS helps better and quality reporting. This shows that adoption of IFRS will bring quality financial statements. The opinions of the auditors and investors were tested by setting up the following hypothesis to know whether there is any significant difference in the opinions provided by them on the statement IFRS helps better and Quality Reporting.

H_0: There is no significant difference in opinions of auditors and investors that IFRS helps better and quality reporting.

H_1: There is significant difference in opinions of auditors and investors that IFRS helps better and quality reporting.

Result: P value = 0.788

The Null Hypothesis cannot be rejected at 5% level of significance.

Hence, it is concluded that there is no significant difference in opinions of Auditors and Investors that IFRS helps better and Quality Reporting. On the other hand, the quality aspect of financial reports provided by a company is understood from various dimensions. The following are some of the important qualitative characteristics of financial statements

- Understandability
- Relevance
- Comparability
- Consistency

- Dr. Reddy's Laboratories limited prepares the financial statements in a more descriptive and elaborate manner by providing all the required explanations to the stakeholders so as to make the financial statements easily understandable. The balance sheet and statement of profit and loss prepared by the company are easily understood by the stakeholders and are supplemented by notes on various items included in the financial statements.
- The word "Relevance" may be understood as a quality phenomenon which affects the decision making process of various stakeholders of a company on the basis of accounting information provided to them. It contains the materiality or timeliness of the information provided. In other words, it may be understood as to what extent various stakeholders consider or believe the information provided to them is relevant for decision making. Every stakeholders needs information that is useful to him. To say that a piece of information is relevant, it must be capable of making a difference in the decision making by a stakeholder in the form of understanding the present situation of the business and predicting the future trend of the business. The annual report of a company is of great importance to various stakeholders like shareholders, bankers, creditors, Government authorities, tax officials, etc.,

For instance, a prospective shareholder should not jump to the conclusion about the prospects of a company just by seeing one financial year data. He should be able to predict the future price of the share before investing in the company. Dr. Reddy's Laboratories limited is providing the annual reports to its stakeholders in a timely manner so that they can use the reports as a basis for their judgements on different decisions about the company. The information relating to various key indicators or performance of the company like revenues, EBITDA, EPS etc., is made available in its reports in a clear manner. In view of this it may be inferred that the financial statements provided by Dr. Reddy's Laboratories limited are relevant for decision making by its stakeholders.

- Since, the company has adopted IFRS for preparing the financial statements, it can be said that the financial statements are comparable over a period of time. The figures in one particular year are easily comparable with the other years. Also, the figures are comparable with other global companies in view of IFRS adoption
- With regard to consistency attribute of the financial statements of Dr. Reddy's Laboratories limited, it is observed that the company has adopted consistent policy of preparing financial statements. For example, the depreciation policy adopted by the company for providing depreciation on various items is consistent over a period of time.

IFRS and Global Capital Mobilization

In the era of globalisation, a lot of companies are now a days trying to access global markets for mobilising the capital needed for starting and expanding the business. Financial reports of a company speak about the methods adopted by it to prepare the financials and the investors globally will rely on the reports to take investment decisions overseas. The role of accounting becomes important in this situation, which will enable the investors across the globe to take informed decisions regarding their investment. Thus investors should be provided all material information regarding the company.

IFRS play an important role in providing the financial statements to the investors worldwide to understand the financial position of a company. The assumption whether IFRS promote global capital mobilization was checked with the help of primary data collected from the auditors and investors.

The table 3 provides an analysis of the data collected from the respondents on the basis of profession.

Table 3: IFRS and Global Capital Mobilization – Auditor's Opinion

Profession	Response	No. of Respondents	Percent
Auditor	Strongly Disagree	2	1.0
	Disagree	15	7.5
	No Opinion	29	14.5
	Agree	125	62.5
	Strongly Agree	29	14.5
	Total	**200**	**100.0**

Source: Primary data

It can be seen from table 3 that 62.5 percent of the auditors agree that IFRS promote global capital mobilization.

Table 4: IFRS and Global Capital Mobilization - Investor's Opinion

Profession	Response	No. of Respondents	Percent
Investor	Strongly Disagree	12	6.0
	Disagree	3	1.5
	No Opinion	20	10.0
	Agree	78	39.0
	Strongly Agree	87	43.5
	Total	**200**	**100.0**

Source: Primary data

It is evident from table 4 that a large number of Investors strongly agree that IFRS promote global capital mobilization. The opinions of the auditors and investors were tested by setting up the following hypothesis to know whether there is any significant difference in the opinions provided by them that IFRS promote global capital mobilization.

H_0: here is no significant difference in opinions of auditors and investors that implementation of IFRS promote global capital mobilization

H_1: There is significant difference in opinions of auditors and investors that implementation of IFRS promote global capital mobilization

Result: P value = 0.000

The Null Hypothesis was rejected at 5% level of significance.

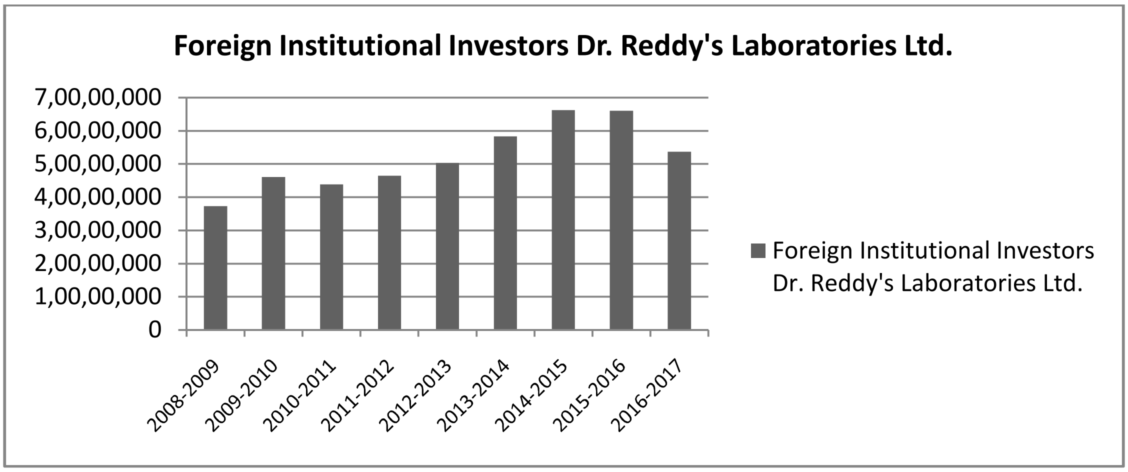
Though the auditors and investors individually agree that IFRS promote global capital mobilization, but in group comparison they differ in opinions on the statement that IFRS promote global capital mobilization. Hence, it was concluded that there is significant difference in opinions of Auditors and Investors that Implementation of IFRS promote global capital mobilization. In order to know the effect of IFRS adoption and global capital mobilization an attempt has been made to study the pattern of foreign holding in the capital structure of Dr. Reddy's Laboratories Limited. Dr. Reddy's Laboratories Limited adopted IFRS during the year 2008-09. The foreign share holding pattern after the adoption of IFRS and global reporting for the year 2008-09 onwards was analyzed and the following trend was observed.

Table 5: Share Holding of Foreign Institutional Investors in Dr. Reddy's Laboratories Ltd.

Financial Year	No. of Shares owned by FIIs
2008-2009	3,73,24,443
2009-2010	4,60,44,755
2010-2011	4,38,34,909
2011-2012	4,64,97,438
2012-2013	5,03,67,192
2013-2014	5,83,53,621
2014-2015	6,62,11,413
2015-2016	6,60,05,077
2016-2017	5,36,94,200

Source: Company annual reports

Chart 1: Foreign Institutional Investors of Dr. Reddy's Laboratories Limited



Source: Company annual reports

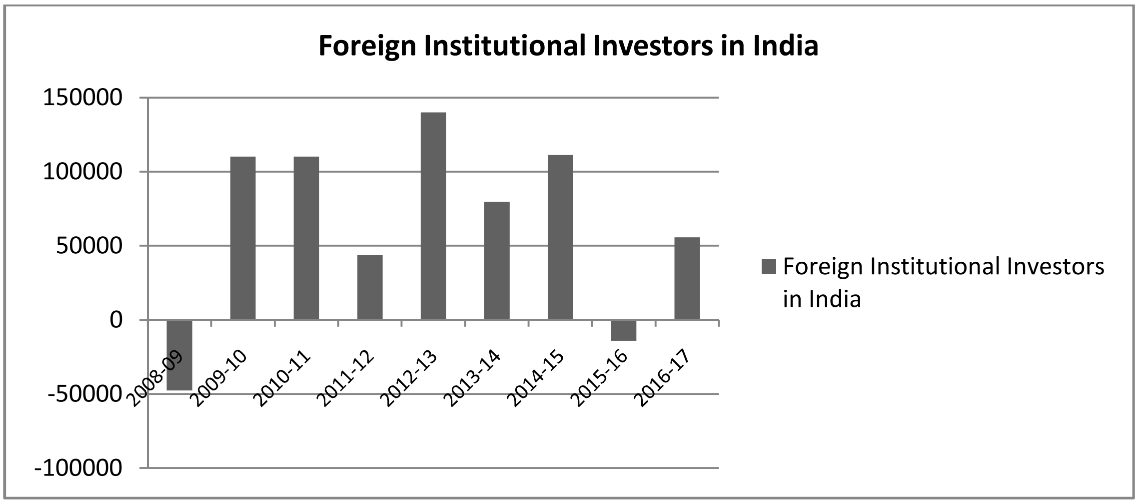
It is evident from the table 5 and chart 1 that, the shares owned by the foreign institutional investors increased continously after adoption of IFRS except the year 2016-17 where the company implemented buy back strategy.

Table 6: Total inflow Foreign Institutional Investors in India

Financial Year	Inflow of FIIs
2008-2009	-47706
2009-2010	1,10,221
2010-2011	1,40,033
2011-2012	43,738
2012-2013	1,40,033
2013-2014	79,709
2014-2015	1,11,333
2015-2016	-14172
2016-2017	55,703

Source: NSDL

Chart 2: Foreign Institutional Investors in India



Source: NSDL

Table 6 and chart 2 show the inflow of foreign institutional investors in India for the period 2008-09 to 2016-17. It is clear that the total inflow of foreign institutional investors in India during the period 2008-09 to 2016-17 has no consistent trend during the period of study. On the other hand, there is negative trend in FIIs in the year 2008-09 due to heavy outflow of investment in the year. This is contrary to the figures of foreign institutional investors in table 5 of Dr. Reddy's laboratories limited which has an upward trend when compared to the base year 2008-09.

Hence, it can be concluded that adoption of IFRS and providing the financial statements globally has boosted the confidence among the foreign institutional investors resulting in an increase in the share holding pattern across the period of study when compared to the year 2008-09. Thus, the decision of the company to adopt IFRS has shown a positive development on the share holding pattern with the increase of investment by foreign institutional investors.

Conclusion

In India, IND AS are adopted versions of IFRS. The Government of India through Ministry of Corporate Affairs has made IND AS mandatory for every listed company and unlisted companies with net worth greater than or equal to 250 crores. Based on the data collected, it can be concluded that corporate reporting under IFRS has reached new heights which aims at providing all the relevant information to the stakeholders which is comparable and easily understandable. Adoption of IFRS and reporting globally has brought a positive change in the investors globally and increased the level of confidence among the investors resulting in an increase in the share holding pattern by the foreign investors in Dr. Reddy's Laboratories Limited.

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STATUS OF NOMINATION AND REMUNERATION COMMITTEE IN THE LIGHT OF SEBI'S LODR 2015 REGULATIONS
(A CASE STUDY OF BANKING AND HOUSING FINANCE SECTOR COMPANIES INCLUDED BSE SENSEX COMPANIES)

CMA Dr. Meenu Maheshwari*

ABSTRACT

Sound Corporate Governance makes corporation a good corporate citizen who enjoys the position of respect and goodwill as well as the status of an icon. Now in India, all listed companies are regulated by the Companies Act 2013 aim of and SEBI's LODR 2015. The main of this study is to exhibit the status of Nomination and Remuneration Committee of Banking and Housing Finance Sector Companies included in BSE Sensex. This paper includes HDFC Bank, ICICI Bank, SBI and HDFC for the financial years 2014-15, 2015-16 and 2016-17. The study reveals that all companies except SBI have appointed ID chairman as well as ID members. In 2014-15, 2015-16 chairman of HDFC bank did not attend the AGM. It is suggested that chairman as well as members should attend the meetings to play an active role in the working of this committee.

KEYWORDS: *Corporate Governance, SEBI, LODR, Independent Director, Executive Director.*

Introduction

Corporate Governance is a practice of doing everything in a better manner to improve relations between a company and its stakeholders and to ensure that management is working in the interest of shareholders. Hon'ble Prime Minister Shri Narendra Modiji in his speech at the launch of Shri Vinay Sahastra Buddhe's Book 'Beyond a Billion Ballots' suggested by our ancient Indian text several instances related to good governance. Hon'ble Prime minister said that "when we talk of good governance, let us see what Ram Rajya according to Ramayana is and what kind of governance is described in it". "**Ramayana says, "Ram Raj Baithe Triloka, Harshit Bhaye Gaye Sab Soka; Bayaru Na kar Kaahu San Koi, Ram Pratap Vishamta Khoi…!"** Friends, today we say that there should be no discrimination among people. What is the meaning of this chuapai? It talks about **such governance that has no inequality, ups and lows, difference among rich and poor."**

The Corporate Governance framework should recognize the rights of stakeholders established by law. To protect the interests of all stakeholders and give them opportunity to obtain effective redress for violation of their rights, the SEBI as well as Indian government regularity bodies have recommended appointing various committees of the Board of Directors. Nomination and Remuneration committee is one of the important mandatory committee of Board of Directors. As per SEBI's LODR-2015, Chapter IV, point 19, Nomination & Remuneration Committee shall be as follows:

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- The board of directors shall constitute the nomination and remuneration committee as follows:
  - The committee shall comprise of at least three directors
  - All directors of the committee shall be non-executive directors
  - Al least 50 % of the directors shall be independent directors
- The chairperson of the nomination and remuneration committee shall be an independent director: provided that the chairperson of the listed entity; whether executive or non-executive, may be appointed as a member of the nomination and remuneration committee and shall not chair such committee.
- The chairperson of the nomination and remuneration committee may be present at the annual general meeting, to answer the shareholders' queries; however, it shall be up to the chairperson to decide who shall answer the queries.
- The role of nomination and remuneration committee shall be as specified as in Part D of the schedule II.

Review of Literature

Vo and Phan (2013) studied how Corporate Governance is related with the performance of firms in Vietnam. The nine elements of corporate governance have been taken into consideration in which aspect of compensation of the board has also been analyzed. The sample of 77 listed firms which were trading during 2006-11 has been considered for study and Flexible Generalized Least Square (FGLS) has been used for further analysis. It has been found that compensation is positively related with performance of the firm. It has recommended that firm should maintain competitive and suitable level of compensation as it leads to better relationship between shareholders and firm's management, thus resulting in boosting shareholder's value.

Sugiarto (2017) in his paper identified the requisite ideology for good corporate governance in terms of various variables which were not incorporated in the Company law, 2007. The research was qualitative and descriptive in nature and data were collected through primary, secondary and tertiary legal materials. Under the head of accountability principles, aspect of nomination and remuneration committee has been explained in context of its role and functions. It has been asserted that though Article 121 of Company law, 2007 stated the existence and meaning of nomination and remuneration committee but has been extremely unclear about its task, structure and role.

Nachemson-Ekwall and Mayer (2018) pointed in their paper that amongst all the committees in the company, nomination committee has been given least importance. The core objective of paper was to suggest the instrumentality of nomination committee for organisations. This has been done by observing the operations of nomination committee in two countries i.e. Sweden and the UK. They found that though operations of companies in these countries are quite similar, however they differ in terms of presence of main shareholders and its influence on directors and concentration of shares. They further opined that many of the issues and conflicts in corporate governance can be addressed by flexible application of internal and external nomination committee along with sustaining wealth creation in the interest of company as well as shareholders.

Research Methodology

- **Research Questions/Issues Examined**
  - Whether transparency has been maintained in the composition of the committee?
  - Has the independent director been appointed as chairman of the committee?
  - Whether the compliance of minimum requirement of number of NED has been maintained?

- Has the information about remuneration of directors of the committee been disclosed?
- How many meetings held by the committee?
- Has committee's report been disclosed?
- Whether chairman attended AGM?

- **Scope of the study and Collection of Data**

This research paper highlights about the formation, composition, meetings and report of the Nomination and Remuneration Committee for the Banking and Housing Finance Sector Companies for the year 2014-15, 2015-16 and 2016-17 according to LODR 2015 regulations. HDFC Bank, ICICI Bank, SBI and HDFC have been taken for the study.

Data have been collected mainly from the annual reports published by the respective companies. Besides this Companies Act 2013, SEBI's LODR 2015 Regulations, books, journals, reports etc. have been studied.

Data Analysis

Table 1: Status of Nomination and Remuneration Committee of Banking and Housing Finance Sector Companies for the Financial Year 2014-15

S. No.	Particulars	HDFC Bank	ICICI Bank	SBI	HDFC
1.	Transparency in composition of the committee	Total Member-4 C/M-NED/ID ID-4	Total Member-3 C/M-NED/ID ID-3	Total Member-4 C/M-? Nominee-2 NED-2	Total Member-3 C/M-NED/ID ID-3
2.	Compliance of the provisions of Independent Director as chairman of the committee	Yes	Yes	No	Yes
3.	Compliance of minimum requirement of No. of Non-Executive Directors in the committee. (At least 3 members)	Yes	Yes	No	Yes
4.	Information about Remuneration of Directors	Information provided	Information provided	Information provided	Information provided
5.	Information about number of committee meetings	Total Meeting-2 3 Attended -2 1 Attended -1	Total Meeting-5 3 Attended -5	Total Meeting-1 Not Disclosed	Total Meeting-4 1 Attended -2 2 Attended -4
6.	Disclosure of committee's report	Disclosed	Disclosed	Disclosed	Disclosed
7.	Chairman attended AGM	Absent	Attended	Attended	Attended

Table 2: Status of Nomination and Remuneration Committee of Banking and Housing Finance Sector Companies for the Financial Year 2015-16

S. No.	Particulars	HDFC Bank	ICICI Bank	SBI	HDFC
1.	Transparency in composition of the committee	Total Member-4 C/M-NED/ID ID-4	Total Member-3 C/M-NED/ID ID-3	Total Member-4 C/M-? Nominee-2 NED-2	Total Member-3 C/M-NED/ID ID-3
2.	Compliance of the provisions of Independent Director as chairman of the committee	Yes	Yes	No	Yes

3.	Compliance of minimum requirement of No. of Non-Executive Directors in the committee. (At least 3 members)	Yes	Yes	No	Yes
4.	Information about Remuneration of Directors	Information provided	Information provided	Information provided	Information provided
5.	Information about number of committee meetings	Total Meeting-9 2 Attended -8 2 Attended -9	Total Meeting-8 1 Attended -4 2 Attended-8	Total Meeting-1 Not Disclosed	Total Meeting-3 1 Attended -2 2 Attended -3
6.	Disclosure of committee's report	Disclosed	Disclosed	Disclosed	Disclosed
7.	Chairman attended AGM	Absent	Attended	Attended	Attended

Table 3: Status of Nomination and Remuneration Committee of Banking and Housing Finance Sector Companies for the Financial Year 2016-17

S. No.	Particulars	HDFC Bank	ICICI Bank	SBI	HDFC
1.	Transparency in composition of the committee	Total Member-4 C/M-NED/ID ID-4	Total Member-3 C/M-NED/ID ID-3	Total Member-4 C/M-NA Nominee-2 NED-2	Total Member-3 C/M-NED/ID ID-3
2.	Compliance of the provisions of Independent Director as chairman of the committee	Yes	Yes	No	Yes
3.	Compliance of minimum requirement of No. of Non-Executive Directors in the committee. (At least 3 members)	Yes	Yes	No	Yes
4.	Information about Remuneration of Directors	Information provided	Information provided	Information provided	Information provided
5.	Information about number of committee meetings	Total Meeting-10 1 Attended -9 3 Attended -10	Total Meeting-10 1 Attended -8 1 Attended -9 1 Attended -10	Total Meeting-1 Not Disclosed	Total Meeting-4 3 Attended -4
6.	Disclosure of committee's report	Disclosed	Disclosed	Disclosed	Disclosed
7.	Chairman attended AGM	Attended	Attended	Attended	Attended

Observations

- All companies have formed Nomination and Remuneration Committee in all the three financial years.
- All companies have appointed more than 3 directors as members in nomination and remuneration committee.
- All companies except SBI have appointed ID chairman as well as ID members but SBI did not give information about chairman and it has appointed 2 nominees and 2 NED as members.
- All companies have complied minimum requirement of number of NED as member.
- In 2014-15, 2015-16 chairman of HDFC bank not attended AGM.

Suggestions

- SBI should appoint ID as member and should give information about appointment of chairman.

- The member of this committee should attend all meetings to look the work of this committee and contribute their suggestions in fixing remunerations of directors.

Conclusion

Corporate Governance define the way in which a Corporate Enterprise should be governed. As per SEBI's LODR 2015, BOD shall constitute the nomination and remuneration committee comprise of at least three directors. The chairperson of the committee shall be an Independent director. This committee has the power to formulate the criteria for determining qualification, to fix the remuneration of the directors. Further it has right whether to extend or continue the term of appointment of IDs on the basis of the report of performance evaluation of Independent directors.

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A STUDY ON QUANTUM OF DISCLOSURE AND ITS ASSOCIATION WITH CORPORATE ATTRIBUTES
(WITH SPECIAL REFERENCE TO PHARMACEUTICAL COMPANIES)

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Dr. Satish Maheshwari**

ABSTRACT

This study examines the determinants of corporate disclosure level of pharmaceutical companies in India. Specifically, the study investigates the relationship between three corporate attributes- size, Profitability, age and extent of disclosure in pharmaceutical companies in India. In the research methodology a sample size of 5 pharmaceutical Indian companies has been taken through random sampling. For the study we have collected secondary data. The corporate attributes (independent variables) which is used in the study are firm size, profitability, age and corporate disclosure (dependent variable) was disaggregated into corporate disclosure. The data were analyzed using both correlation and multiple regression analysis. Our empirical results show a significant positive association between firm size, profitability, age and disclosure. Finally the whole research was carried out in a systematic way to reach at exact result. The whole research and findings were based on the objectives.

KEYWORDS: *Corporate Attributes, Corporate Disclosure, Pharmaceutical Companies, EPS.*

Introduction

American Accounting Association (AAA) defines disclosure as, "The movement of information from the private domain (inside information) in the public domain. Its ultimate aim is to provide information which is potentially for making economic decisions and which, if provided, will enhance social welfare" (AAA 1975 as quoted in Glautier, 1985). The idea of disclosure is of extraordinary hugeness to the achievement of the goals of money related announcing. Money related detailing is the correspondence of monetary data of an undertaking to the outer world.

In this era an attempt has been done to analysis the relationship between company attributes and corporate disclosure of pharmaceutical companies. The selected attributes are-size of a company measured in terms of its market capitalization, age of a company (in years) and EPS (Earning per Share). There are many reasons to believe that no comprehensive study has been conducted in India to examine the disclosure practices of Indian pharmaceutical companies. The present study is an attempt to analyze the disclosure practices of the selected Indian pharmaceutical companies for a period of five years.

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Review of literature

Chander (1992) analyses that company attributes such as size of the company measured in terms of net tangible assets and age of the company had a positive and significant association with the disclosure score in both the sectors in all the five years of study.

Mahajan and Chander (2007) examined the quantum of disclosure and its association with corporate characteristics such as age, size, profitability, and leverage, listing status, shareholding pattern, audit firm and residential status of a company. An index of 90 items was prepared and un- weighted disclosure scores were used to compute the quantum of disclosure in the company annual reports. Results showed that there was a significant association between size, profitability, audit firm and disclosure level.

Singh (2009) made a comparative analysis of the corporate disclosure behavior of the large and mid cap companies in India for 1999-00 to 2005-06. Results of the study revealed that corporate disclosure behavior of large companies was better as compared to mid-cap companies. He also examined the effect of company characteristics on the quantum of disclosure and found that impact of all the seven attributes (total assets, sales, market capital, net profit, age, sectors and listing status) on corporate disclosure was higher in large companies as compared to mid-cap companies.

McNally, Eng and Hasseldine (1982) focused on: (a) the importance of items to be disclosed in annual reports, as perceived by the financial editors and the stock exchange members; (b) the disclosure practices of manufacturing companies vis-a-vis perceptions of external decision-makers; and (c) examining the possible association between the disclosure practices and selected company attributes such as size, rate of return, growth and auditors. The study revealed that the level of actual disclosure by companies was lower than what the professional external users perceived to be desirable. They concluded that a significant association existed between size and both the level of disclosure and the average score for each company.

Cooke (1992) examined the relationship between the quantum of disclosure and three corporate attributes - size, listing status and nature of industry- for 35 Japanese companies. This study was a unique one in the sense that the size of the company was measured in terms of a composite variable i.e., a linear combination of eight alternate indicators of size - capital stock, turnover, number of shareholders, total assets, current assets, fixed assets, shareholders funds and bank borrowings. He concluded that the level of disclosure was positively and significantly associated with dl the three explanatory variables - size, listing status and nature of industry.[1]

Lal (1985) examined the disclosure level of 180 manufacturing companies in the private sector for the years 1965 and 1975. The study was also made to analyze the effect of four company characteristics, viz., size of assets, margin of earnings, and industry nature on the quality of disclosure. The regression analysis results revealed that there is a positive association between the quantum of disclosure and size of the company (which is measured by assets), margin of earnings, industry nature and its relationship with a large industrial house. However, the 'size of the company' possessed a better association with the level of disclosure than the other three variables.[2]

Objective of the Study

It is to examine the association between selected corporate attributes and quantum of disclosure of selected pharmaceutical companies in India.

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1 T. E. Cooke. (1992). The impact of size, stock market listing and industry type on disclosure in the annual reports of Japanese corporations. Accuunriag und Business Research, 23(91), 229-237.

2 J. Lal. (1985). Corpclrnre annual report; Theory ar~dpracticeN. ew h l h i ; Sterling Publishers Pvt. Ltd.

Hypothesis of the Study

H_0: There is no significant relationship between the quantum of disclosure and selected company characteristics.

H_{01}: There is no significant relationship between the quantum of disclosure and size of a company.

H_{02}: There is no significant relationship between the quantum of disclosure and profitability of a company.

H_{03}: There is no significant relationship between the quantum of disclosure and age of the company.

Research Design

- **Population of the Study:** The present study 'A study on quantum of disclosure and its association with corporate attributes ' has been undertaken using a sample of 5 Indian pharmaceutical companies.
- **Sample of the Study:** Under Non Probability sampling convenience sampling technique was used for the study.
- **Period of Study:** For the research purpose the period of study considered as selected pharmaceutical companies from year 2013 – 2018.
- **Data Source:** For the research purpose secondary data was used from annual reports of selected pharmaceutical companies published on company's website, CMIE Data base, library IIM-Indore, Central library DAVV Indore were referred.
- **Statistical Tools:** In the research study following statistical tools were used through SPSS 20.0 student version:
  - Regression Analysis
  - Descriptive Analysis
  - Independent t-test
  - Correlation Analysis
  - Percentage Analysis

Econometric Models Framework and Description of Variables

The study mainly analyses the impact on disclosure practices adopted by pharmaceutical industries of size, Profitability and age of the companies. In this study 5 major pharmaceutical companies have been consider for study.

Scope of the Study

The study includes all pharmaceutical companies. The present study was initiated in 2013 and there were 5 pharmaceutical companies included in the study. The scope for further research can includes other pharmaceutical companies as the sector is very large and there are other sectors also for which the researcher can conduct study. Also as we have includes data for only 5 years that can also be scope for researchers.

Limitations of the Study

The present study suffers from the following limitations:

- Annual reports of some of the pharmaceutical companies for some years were not available.
- The time constraint is also major limitation as the analysis has been done only for the year 2013-18.
- Only 5 pharmaceutical companies has been included in the study which may be faulty representative.

Relation between Company Attributes and Extent of Disclosure

Many researchers like Lal (1985), Chander (1992), Kohli (1998), Mahajan and Chander (2007), and Singh (2009) have studied the association of company characteristics and the disclosure levels of companies. They found positive relationship between majority of the attributes and quantum of disclosure of companies. The present paper analyzes the association between company attributes and disclosure level of pharmaceutical companies. The selected attributes are- size of a company (measured in terms of its market capitalization), age of a company (in years) and EPS (Earning per Share).

Company Attributes and Disclosure

To know the association between various corporate attributes and disclosure level, multiple regression models has been developed by taking companies disclosure index scores as dependent variable and company attributes (size, age of company and EPS) as independent variables. The significance of this relationship has been tested by 't'-test at various levels of significance.

- **Size**

Size of the company is measured in terms of market capitalization and it is the most widely used measure. Many researchers found a positive association with the size of company and its disclosure level. The results of size and disclosure for selected companies are given in Table 10.1. Correlation results of companies also given in Table 10.1 which shows that there is a positive correlation in size and disclosure score for most of the companies. Regression coefficient (R^2) is also higher for most of the companies. The highest regression coefficient is 0.64 for market capitalization indicating that 64 percent of the variation in mandatory disclosure score is explained by size of the company. Data reveals that companies having high correlation coefficient. Results of 't' value depict that there is positive association between size (market capitalization) and disclosure scores of all 5 companies as P value <.05 in all cases.

- **Age of Company**

Age of company is also an important factor explaining the variations in the disclosure scores of different companies. Companies become aware about the benefits of greater disclosure as they get mature (Chander, 1992). Age of a company is measured in terms of number of years from the date of its registration with the company's act 1956 for the purpose of the study. Kohli (1998) and Singh (2009) found in their studies that older companies disclose more information than new companies. Chander (1992) also observed that there is a significant relationship between age of accompany and its disclosure score.

- **EPS**

Profitability is measured in terms of Earning per Share (EPS). Results indicate positive relationship between profitability and extent of disclosure. Chander, 1992 found that the companies those earn less profit may disclose less information because they may have fear that more disclosure may affect their profitability adversely (Chander, 1992). Results of pharmaceutical companies are given in Table 1. The following regression model has been developed to study the nature of association between selected companies attributes and extent of disclosure:

Disclosure = f (Size, EPS, Age of company)

Y = a+ b1x1+b2x2+b3x3 where,

Y = Disclosure score (dependent variable)

a= Intercept and b1, b2, b3 = regression coefficients.

X1 =Size

X2= EPS

X3= Age of Company

	Coefficients	Standard Error	t Stat	P-value	correlation
Market capitalization	1.066	0.030	35.568	0.018	0.591
EPS	0.738	0.031	24.167	0.026	0.061
age	0.421	0.021	20.040	0.032	0.772

Table 1: Regression Results

Observations	5.000
Sum of weights	5.000
DF	1.000
R^2	1.000
Adjusted R^2	0.999

Findings

- **Correlation Results**

The association with corporate characteristics and disclosure of pharmaceutical companies is analyze by regression and correlation model. The result shows that r values for market capitalization, EPS and age are 0.591, 0.061, 0.772 respectively which shows high correlation between disclosure and age and size of the companies, although correlation between EPS of the companies and disclosure scores is also positive.

- **Regression Analysis Results**

Disclosure scores may be vary due to different company attributes. To know the relationship of company attributes and quantum of disclosure, three company attributes i.e. size, age of company and EPS are studied.

  - Significant and positive association between size and disclosure exists in all companies. As the P value 0.018 which is less than 0.05, thus we reject null hypothesis and accept alternative hypothesis that there is a significance association between size of the companies and disclosure. Large companies disclose more information than small.
  - Tables present the model summary. The R2 value of disclosure, which indicates the explanatory power of the independent variables, is exact 1. This means that 100% variation in the dependent variable is explained by the independent variables variation.
  - Significant positive association between EPS and disclosure exists in all companies. As the P value is, 0.026 which is less than 0.05, thus we reject null hypothesis and accept alternate hypothesis that there is a significance association between EPS of the companies and disclosure.
  - Significant positive association between age of the company and disclosure exists in all companies. As the P value is 0.032 which is less than 0.05, thus we reject null hypothesis of disclosure and accept alternate hypothesis that there is a significance association between age of the companies and disclosure.
  - Multiple regression results show that ‘market capitalization’ has the highest impact on disclosure. Overall the impact of all the selected attributes taken together have more Impact on disclosure in selected pharmaceutical companies.

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AWARENESS AND IMPACT OF GST AMONG SMALL BUSINESS OWNERS: A STUDY OF MANDSAUR CITY IN M.P.

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ABSTRACT

GST (Goods and Service tax) is a visionary step intended towards rationalizing the giant indirect tax system in India. The implementation of GST is reducing tax burden and enhancing the ease of doing business in the country. The impact of GST has two key segments weight; one is to the business and second is to the customers who are the actual bearer of tax costs. Indian unorganized sector and portion of industry those who are enjoying the exemption will also contribute significantly to the growth of countries GDP. The basic purpose of conducting the study is to know the awareness level of small businessman towards GST and to assess the actual impact as they are facing. As it is known that impact will be there either on manufacturing or selling but to know the extent of impact and level of satisfaction study is conducted. The study is survey based in which data was collected from 50 business man who are residing in Mandsaur city of MP. The tool used for collection of data was structured questionnaire. The results obtained after analysis revealed that businessman are aware about GST implementation and opined that it's a fair tax system but it requires more clarity, simplification in procedure because they have to depend on CA's during the online submission. The paper had tried to attempt the actual impact of GST and suggestive measures have also been provided at the end of study.

KEYWORDS: *GST, GDP, VAT, State Tax, Central Tax, Purchase Tax, Entry Tax.*

Introduction

The only source of income for the Indian government is the collection of the tax, and the major source of the tax is indirect tax which is also known as GST, which defines "one tax one nation". Before 1 July 2017 there were many state taxes imposed on the name on indirect tax like luxury tax, VAT tax, state tax, central tax, purchase tax, entry tax, entertainment tax, taxes on lottery, state cesses and surcharges, and the central taxes like central excise duty, service tax, special additional duty of custom etc are implemented. Imagine the tax burden on the payer and much calculation needed to be done to pay each tax. This created the situation of perplexity among the merchandisers. The introduction of GST has cleared the formation of indirect tax by introducing online filling of GST. The other main objective of GST was to remove the cascading effect, though many people argue that this objective has not been achieved yet. The cascading effect means "tax on tax" which coordinately increase the price of product hence lead to the inflation in the economy.

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The implication of GST included dual taxation system i.e. Central GST (CGST), State GST (SGST), Integrated GST (IGST). If the location of supplier and buyer are in same state then the seller has to collect both CGST and SGST from buyer, both central and state government will agree on the appropriate ration of sharing revenue. This has reduce the cascading effect and made the tax structure more simplified. Rates are implied by government on the mutual basic but it does not exceed more than 14%. The tax rate slaps introduced are 5%, 12%, 18%, 28%, however alcohol/ liquor, electricity, and petroleum products are not included in the GST rates. One of the major reason for not including petroleum into GST is the huge revenue around 28% income earned by government, imposing of GST will stop their income. The same reason is with the exception of GST on liquor, above 50% of the revenue in some states are generated by the sale of the alcohol. Electricity is the necessity for living, so it is required to keep cheap and affordable also some of the political parties may promise to provide the electricity cheaper may dilute the citizens.

Implication of GST was not an easy task, to make 133 crores people understand about the new system especially where people hesitate to accept changes is the biggest challenge. The listing of the goods and service into specific rates and its explanation has countered the majority of problems. In the initial days the price of many goods and services was increased which created the inflation in the economy. Lack of clarity on the abetments introduced in the economy has made the minds more diplomatic. Many businesses still lack the proper IT structure to create GST invoice and extract required reports it also include lack of proper trained resources and re – skilling of the management, which created extra burden across the sectors. It was difficult for the startup companies to face GST as they were not properly setup in the industry and they were needed to understand the new taxation system. At the end we can say that GST bought the transparency and wider platform for taxation. Its not easy to remove the corruption from the system but it can be reduced to the certain level.

Literature Review

- **Kaur (2018)**

The purpose of study was point out the awareness among people about GST, and to find out the expectations of people after the implementation of GST. The study concluded that still people are not well aware about GST and due to lack of proper information they are having negative perception towards the act. It also shows the lack of goods and services information of the responded, not able to identify the slabs implemented.

- **Chouhan et.al. (2017)**

The study focused on awareness of 148 small business owners in Rajasthan state. It also revel the problems faced by the small business owner due to lack of adequate knowledge and reliefs provided in the act. The major problems were that customer refuse to pay GST, which create a problem while submitting the taxation, other problem arises due to the inclusion of technology in the process has created the perception of difficult tax among the responded. The levels of awareness of the responded were low and moderate and majorly not willing to support the act.

- **Banik and Das (2017)**

The study revealed the challenges to be faced by India Economy after the implication of GST, it throw light on the comparison of GST with previews Tax system, there were 31 taxes including sales tax, state tax etc, which are now turned into CGST, IGST, SGST making tax structure more complicated. The inclusion of technology in filling the GST has made the need to add trained employee for this purpose. The change in GST rate made the small venders and businessman more confused about the act. The study conclude that GDP will fall down due to the introduction of unplanned tax system thus its needed to more simplification in the act.

- **Kumar (2017)**

The study analyzed the previous Indirect tax system and GST, briefly explained the complete concept of the GST, its rate and its comparison with the previous tax structure, the present GST system has removed many hurdles while filling the taxation. The examples provide more clarification on how GST is levied on the goods and how it is reducing the burden on small venders and businessman. The study concludes that the GST is easier than earlier tax system; it will provide more benefit to the manufactures and thus increase the competition in market.

- **Mishra (2018**)

The study provided glimpse of the rates. It throw glance on the impact of GST, on pharmacy, agriculture, textile, mobile and accessories, telecommunication sector, real state, FMCG, automobiles, banking, financing. The research paper concludes that the implication of single tax system will attract more manufactures to get engage in the sector. The individuals will also get benefit as the prices of the products will decrees and consumption will increase which will lead to the increase in GDP. Increased GDP will attract the foreign investment which will directly or indirectly create the employment opportunity.

- **Kumar and Sarkar (2016)**

The study described the history of GST from International to National level. It also provided brief analysis of previous and present taxation system, and its other supplementary taxes with facts and figures. The facts presented in the study shows that how the GST is beneficial to customers, industries, exporters, and the Economy. The study conclude that GST should be implemented as soon as possible as delay in the implication may delay may provide negative impact in the economy.

- **Bhuyan and Nayak (2017)**

The study accommodated the various advantages of implementing GST, says removing of cascading effect, increasing the efficiency of logistics, regulating the unorganized sector etc. The paper on the basis of facts and figures shows the impact of GST on telecom, cement, banking and insurance, airlines, E-commerce, FMCG, technology sectors. The study conclude that the GST will provide the positive impact on economy and will increase the growth of GDP, and will generate the employment, but it will show the negative impact on the service sector as the rates of GST in the service sector has increased. GST will bring innovation, accountability, and transparence in the tax structure.

Research Gap

From the literatures it is clear that GST is an emerging issue for the research in the subject of economy. At Macro level many study have been conducted but at micro level and semi urban area still no research is carried out. Keeping in view, the study attempts to identify the level of awareness and impact of GST among the small business owners in the Mandsaur city of Madhya Pradesh.

Objectives of Study

- To identify the awareness of GST among the business owners residing in Mandsaur city.
- To assess the impact of GST among the business owners residing in Mandsaur city.

Research Methodology

The study is descriptive in nature where small business owners were selected as respondents who are dealing in various businesses in the Mandsaur city. The chapter divided into three parts:

- **Sources of Data**

Primary data were collected primarily through direct administration of the questionnaire. The study uses secondary data to support and substantiate primary data and also to form a strong theoretical base. The secondary data were collected from Research paper, SSRN, shodhganga, Local bodies, research journals, newspaper, articles, GST portals, working papers etc.

- **Sample Size:** 50 Small business owners.
- **Sampling Technique**: In Non Probability method of sampling, convenient technique was applied.

Part A

Demographic Characterizes

Gender	**Frequency in Percentage**
• Male	100 %
• Female	0%
Age	
• 18 – 30	12%
• 30 – 50	54%
• 50 above	32%
Literacy Level	
• Illiterate	0%
• Up to Sr. Secondary	36%
• Graduation	52%
• Post Graduation	12%
Occupation	
• Farmer	0%
• Businessman	96%
• Job	4%
• Daily Wages	0%
• Others	0%
Monthly Family Income	
• Less than Rs 5000/-	4%
• Rs 5000 – 15000	14%
• Rs 15000 - 30000	34%
• Rs 30000 and above	48%
Religion	
• Hindu	42%
• Muslim	12%
• Christian	6%
• Sikh	16%
• Jain	20%
• Any other	4%
Type of Area	
• Urban	96%
• Semi urban	0%
• Rural	4%
• Remote area	0%
Nature of Family	
• Joint family	36%
• Nuclear family	64%

Source: Computed (Figures in Percentage)

Demographic Characteristics

A survey conducted on 50 people to find of the demographic character of responded. It was found that out of 50 responded 100% of the responded are male. Around 12% of responded are of the age of 18-30 years, 54% of the responded are of the age 30 – 50 years and 34% of the responded are of 50 years or above. About 34% of the responded are literate up to secondary school, 52%of the responded are graduated and 12% of the responded are postgraduate, this shows that the education level is good in Mandsaur district. 96% of the responded are businessman whereas 4% of the responded are engaged in job. 4% of the responded has monthly family income less than 5000, about 14% of the responded earn income from 5000-15000 per month, 34% of the responded earn the monthly income from 15000-30000, the majority of the responded i.e. 48% earn monthly income equal to or above 30000 which clearly show that the income level of the respond are high.

Part B

How many responded has GST awareness	**Frequency in Percentage**
• Yes	100 %
• No	-
What was the source of awareness?	
• Friends/ family	22%
• Media	52%
• Internet	26%
• Teacher	-
• Others	-
Does GST is burden for people?	
• Yes	18
• No	82
Is GST is a fair tax system?	
• Yes	48%
• No	16%
• Don't	-
Is available legislation is satisfactory in relation to GST?	
• Yes – satisfactory	30%
• No – need more clarity	70%
GST is easier than early tax system.	
• Yes	88%
• No	12%
What kind of tax GST is?	
• Indirect tax	100%
• Direct tax	-
Who is the Head of GST council of India?	**Frequency in percentage.**
• Mr. Narender Modi	4%
• Dr. Rajeev Kumar	6%
• Mr. Arun Jaitely	26%
• None	64%
Does the business is registered under GST?	
• Yes	92%
• No	8%

Do the have Knowledge about GST online portal?	
• Yes	100%
• No	-
Does the available legislation in relation to propose GST is satisfying?	
• Yes – satisfactory	18%
• No – Need more clarity	82%
Does the respondents current software equipped is capable enough to handle the proposed GST?	
• Yes	92%
• No	8%
• Not applicable	-
Need assistance of lawyer or CA while filling the tax?	
• Required	60%
• Not required	40%

The tabulation presentation shows that the responded have complete knowledge about the existence of GST and its embedment in the bill passed in the parliament, which indicate that the responded are well aware of the changes in the tax implementing method. The next table shows that the major source of knowledge is from media and then Internet which clearly confine that the people are more affected by media and internet which is the fastest and easy source of information to the public. The media influence the most to the responded .In the third record it is shows that majority of the responded accept that GST is not burden on Income it has reduced the major drawbacks of the previous tax filing system. Whereas some responded have the opinion to add more abetments in the present law to reduce some other effecting factors. The changes in the system of filing tax have given some relief to the responded. Record four shows that the majority of responded states that the implementation of GST is a fair tax and is acceptable by the responded, it indicate that the responded has accepted the change in the system and they welcome, whereas some responded are not satisfied with the implementation of GST and need more changes in the present tax system. Record four shows that the majority of responded i.e. 70% wants to need more clarification in the present GST legislation, which shows that the GST legislation is a complicated concept which required more clarification and more relaxed abstracted among the responded. Whereas 30% of the responded are satisfied with the legislation, doesn't ask for further clarification.

The record six indicates that 88% of the responded accepts that the implication of GST is much better than the earlier tax system, the filling and maintenance of the taxation is much easier, reliable and flexible. It reduces the extra efforts and paper work. Only 12% of the responded feel that the GST is complicated and is not readily acceptable without much abetment. Record seven shows that 100% of the responded are clear that the GST is Indirect tax, which indicates that each responded has the perfect knowledge about what the kind of GST taxation is. There are two types of taxation system in the country, the direct tax and indirect tax, the implication of GST is on the place of Indirect tax which is filed by the organization. The Record shows that 92% of the responded are registered under GST, which indicates that there is majority of tax depositor in the Mandasur district and business is conducted within the rules of government. Only 4% of the responded are not registered under GST due to new entry in the market or change/ expansion in the business. The registration of business is done under the rules and regulation provided by the government. Results indicated that 100% of the responded has knowledge about the GST online portal through media, internet, friends also know the embedment, inclusion of new methods to file the GST and to get the reimbursement from government. GST online portal has reduced the paper work and made the filing of taxation easy. Government declare the last date via sources, keeping in mind the dates, filing the tax and take the advantage of reimbursement. In short they were completely satisfied with the introduction of the new changes in the legislation, whereas 82% of the responded where in doubts regarding the introduction of the legislation and ask for more clarification and establish necessary abetments for ore relaxation in the slaps and return.

Part C

Reduction of corruption in the economy.	**Frequency in Percentage**
• Highly Agreed	12%
• Agreed	62%
• Neutral	18%
• Less agreed	8%
• Fully Disagreed	-
• Total	100%
GST legislation is satisfactory	
• Highly Agreed	-
• Agreed	42%
• Neutral	28%
• Less agreed	26%
• Fully Disagreed	4%
• Total	100%
Ease in filing of GST online.	
• Highly Agreed	38%
• Agreed	38%
• Neutral	16%
• Less agreed	8%
• Fully Disagreed	-
• Total	100%
Rate implication on the occupation satisfactory	
• Highly agreed	18%
• Agreed	18%
• Neutral	14%
• Less agreed	46%
• Fully Disagreed	4%
• Total	100%
Benefit of the government schemes.	
• Highly agreed	-
• Agreed	18%
• Neutral	36%
• Less agreed	46%
• Fully Disagreed	-
• Total	100%
Applied existence law is fairly applied.	
• Highly agreed	10%
• Agreed	32%
• Neutral	10%
• Less agreed	44%
• Fully Disagreed	4%
• Total	100%

Present system is beneficial then early tax system.	
• Highly agreed	30%
• Agreed	34%
• Neutral	16%
• Less agreed	12%
• Fully Disagreed	8%
• Total	100%
Necessary amendments should be introduces timely in the legislation	
• Highly agreed	60%
• Agreed	32%
• Neutral	8%
• Less agreed	-
• Fully Disagreed	-
• Total	100%
Government is taking corrective measures for the flexibility in the current taxation system.	
• Highly agreed	8%
• Agreed	32%
• Neutral	40%
• Less agreed	16%
• Fully Disagreed	4%
• Total	100%
Inflation cost reduced due to GST.	
• Highly agreed	6%
• Agreed	32%
• Neutral	12%
• Less agreed	38%
• Fully Disagreed	12%
• Total	100%
Present tax system moved the pace of economy growth.	
• Highly agreed	30%
• Agreed	52%
• Neutral	10%
• Less agreed	6%
• Fully Disagreed	2%
• Total	100%
GST affected the income.	
• Highly agreed	48%
• Agreed	12%
• Neutral	24%
• Less agreed	8%
• Fully Disagreed	-
• Total	100%
Implementation of GST increased the documentary procedure.	
• Highly agreed	10%
• Agreed	50%
• Neutral	4%
• Less agreed	34%
• Fully Disagreed	2%
• Total	100%

Implementation of GST reduced the manual work.	
• Highly agreed	44%
• Agreed	16%
• Neutral	8%
• Less agreed	24%
• Fully Disagreed	8%
• Total	100%
GST made it mandatory to provide the bill to customer.	
• Highly agreed	32%
• Agreed	28%
• Neutral	36%
• Less agreed	4%
• Fully Disagreed	-
• Total	100%
E – WAY bill is beneficial for business.	
• Highly agreed	32%
• Agreed	28%
• Neutral	28%
• Less agreed	8%
• Fully Disagreed	4%
• Total	100%

Findings

- "GST has reduced the corruptions" support the statement by 62% vote.
- GST procedure required CA consultancy as 60% of the respondents are not train enough to comply all the requirements.
- 82% respondents are in favour of GST that it's not a burden.
- 42% of the responded are less happy with the implication of rate. Only 18% of the responded are happy with the implied rate.
- 82%, responded required more clarity in the legislation.
- GST was not successful in reduction the inflation in the economy, around 50% of the majority considers that GST has failed in reducing the inflation.
- A majority of around 80% of the responded are in the favor of the statement that GDP has increased the pace of economy growth.
- Introduction of GST has increased the documentary process whereas it has reduced the manual work by providing the online registration in the filing process of tax. More the 50% of the responded answered that GST has increased in their documentation as for each transaction they need proofreading, whereas introduction of online filling of tax has reduced their manual work as they need to submit the framed form with required information.
- In the survey it was detected that 60% of responded find the E- way bill beneficial for business, which has reduced the documentation process as state wise documentation has been eliminated, and the system is user-friendly and it is easy to generate the bill.

Suggestions

- GST council should work towards simplification of GST procedure.
- The rates implemented should be modulated.
- Training session for GST should be conducted at regular basis especially in the semi urban areas.

Conclusion

In the era of globalization there was the need for the powerful and systematic tax structure for competing India at International level. The GST will not only bring the transparency but also it will promote the ease of doing. Earlier every state used to have own levied tax rates which was complicated and increased the price of the goods by cascading effect which hindrance the foreign direct investment also. In the study the responded were well aware of the GST act and the rates implemented on the products but the small businessman were not much satisfied with rates criteria. The new ordinance of online filing the tax has saved much of the time and reduced paper work which was appreciated by responded. 62% of the responded agreed that there was reduction in corruption due to introduction of GST in economy. Majority of responded felt that GST will for sure increase the pace of the economy growth of the country but it requires more clarity as suggested by the study. GST council should continue with efforts to boost Indian economy.

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FDI POLICY IN INDIA: EMERGING ISSUES

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ABSTRACT

The Article features the ongoing changes and alterations in FDI Policy in India. The Department of Industrial Policy and Promotion (DIPP) had made certain changes to the Foreign Direct Investment (FDI) Policy of 2017 issued on Press Note 1 dated 23rd January 2018. The proposed alterations were to be powerful from the date of the FEMA notice. The Reserve Bank of India (RBI) has now issued the Foreign Exchange Management (Transfer or Issue of Security by a Person Resident Outside India) (Amendment) Regulations, 2018 [FEMA 20(R)(1)] dated 26th March, 2018 changing FEMA 20(R) dated 07th November, 2017.[1]

KEYWORDS: *DIPP, FDI, FEMA, Industrial Policy, PROI, NBFCs, CICs, SBRT.*

Introduction

Foreign Direct Investment in India is now accomplishing fast development with vote based system, request and demography looking forward towards the greater and better future. The Department of Industrial Policy and Promotion (DIPP) as a managing office of Foreign Direct Investment assumes a significant job going about as the center of agreement for worldwide organizations hoping to put resources into India under the initiative of Secretary Ramesh Abhishek. DIPP has set new benchmarks in pulling in FDI in India. In the course of the last couple of successive years there have been some extremely wide clearing and profound effect changes in the business and financial condition in the course of recent years, huge numbers of which have additionally had a solid social effect. While a few changes could be viewed as political, there are numerous progressions that have happened fundamentally in light of the fact that the administration of the day bit the projectile. These were long late and just couldn’t be kicked any further not far off – to put it briefly, "the opportunity had arrived".

According to Department of Industrial Policy and Promotion (DIPP), the total FDI interests in India in the midst of 2017-18 stayed at US$ 44.86 billion, demonstrating that organization’s push to upgrade effortlessness of cooperating and loosening up in FDI benchmarks is yielding results. Data for 2017-18 shows that the organizations division pulled in the most raised FDI esteem inflow of US$ 6.71 billion, trailed by media transmission – US$ 6.21 billion and PC programming and hardware – US$ 6.15 billion. Most starting late, the total FDI esteem inflows for the extended length of March 2018 reached US$ 3.31 billion. In the midst of 2017-18, India got the most extraordinary FDI esteem inflows from Mauritius (US$ 15.94 billion), trailed by Singapore (US$ 12.18 billion), Netherlands (US$ 2.80 billion), USA (US$ 2.10 billion), and Japan (US$ 1.61 billion).[2]

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DIPP Secretary Ramesh Abhishek has said on Economic Times at dated eighth June, 2018, that Foreign Direct Investment in India expanded to USD 61.96 billion. In 2017-18 FDI inflows remained at USD 60 billion in the past financial. He additionally said amid the four years of the Modi government, remote inflows hopped to USD 222.75 billion from USD 152 billion in the past four-year time frame. Nonetheless, as per an UNCTAD report, outside direct speculation (FDI) to India diminished to USD 40 billion in 2017.[3]

Recent Changes and Emerging Issues in FDI Policy of India

It is fundamental to include that even while in the meantime the Standard Operating Procedures (SOP) for FDI supports is set up, there is a little information in the overall public space about the productive supports dealt with through the SOP, beside sporadic open articulations by the Department for Industrial Policy and Promotion (DIPP) and the Department for Economic Affairs (DEA). Nothing is known, for example, if any supports have happened in the Telecom, Media, Pharmaceuticals, Private Security Services or the residuary budgetary organizations region. In that limit it is difficult to pass judgment on whether the structure has continued ahead to improve things or not. FDI estimations as far back as nine months of the money related year exhibit an incredibly controlled improvement in FDI, which could be a direct result of various full scale/overall elements and not by any means associated with FDI Policy itself or its progressions.[4]

In detail the key changes according to FEMA 20(R)(1) have been outlined as beneath:

- **Outside Interest in Contributing Organizations, NBFCs and Core Investment Companies (CICs)**
  - FDI in (I) contributing organizations not enrolled as non-banking money related organizations (NBFCs) with the RBI and (ii) Core speculation organizations (CICs), both occupied with the movement of putting resources into the capital of other Indian substances ought to require earlier Government endorsement.
  - FDI in contributing organizations enrolled as NBFCs with the RBI will be under the 100% programmed course.
- **Joint Audit of Investee Companies**

Where a Person Resident outside India (PROI) who has made remote endeavor, shows a particular evaluator/survey firm with an overall framework, by then the audit of the Indian investee association will be endeavored by at any rate two examiners not forming bit of a comparable framework. The evaluator of an Indian investee association appointed by a remote budgetary authority, just like a bit of an all-inclusive social event, would need to work commonly nearby another inspector who isn't a bit of a comparable framework.

- **FDI in Air Transport Services**

Existing Regulations	**Amended Regulations**
Automatic route upto 49%(100% for NRIs and OCBs)	100% FDI allowed as follows: • Automatic route up to 49% • Government route beyond 49% 100% FDI under automatic route for NRIs and OCBs

Beyond 49% under the Government course, the informed guidelines have changed the guidelines to permit FDI past 49% under Government course. FDI in Air India Limited permitted under endorsement course, subject to the accompanying conditions:

- FDI not to surpass 49%, either legitimately or in a roundabout way;
- Substantial proprietorship and powerful control will keep on being vested in Indian Nationals.

- **FDI in Construction Development**

Townships, Housing, Built-up Infrastructure and Real Estate Broking:

Another provision embedded, which states that land broking administrations don't add up to land business and 100% outside venture is allowed under the programmed course.

- **FDI in Single Brand Retail Trading (SBRT)**

Existing Regulations	Amended Regulations
100% FDI allowed as follows: • Automatic Route upto 49% • Government route beyond 49%	100% FDI under Automatic Route

Key Changes in Conditions Related to Single Brand Retail Trading (SBRT) are as follows:

- For the underlying five years, steady sourcing by abroad organizations, including their gathering organizations for the particular brand will check towards the obligatory 30% neighborhood sourcing responsibility.
- The prerequisite of permit understanding between brand proprietor and speculator has been evacuated.
- A Committee to be shaped under the Chairmanship of Secretary, DIPP, with agents from NITI Aayog concerned Administrative Ministry and free specialized expert(s) to analyze the case of candidates of the items being in the idea of "condition of-workmanship" and "front line" innovation, where nearby sourcing is beyond the realm of imagination and give suggestions for such unwinding.

The following paragraphs have been deleted:

- An Indian producer is allowed to sell its very own marked items in any way, i.e., discount, retail, including through web based business stages;
- The Indian maker would be the investee organization, which is the proprietor of the Indian brand and which makes in India, as far as esteem, at any rate 70% of its items in house, and sources, at most 30% from Indian makers.

- **FDI in Pharmaceuticals**

The meaning of restorative gadgets revised in the guidelines and its reference to Drugs and Cosmetics Act expelled.

- **FDI in Power Exchanges**

Outside Institutional Investor/Foreign Portfolio Investor allowed contributing even under the essential course (past just allowed under optional course) inside the general top of 49% in power trades enlisted under the Central Electricity Regulatory Commission (Power Market) Regulations, 2010.

- **Others**
  - Issue of capital instruments under the accompanying circumstances presently allowed under the programmed course, gave the segment is under the programmed course: − Swap of capital instruments (allowed under the current guideline); − Import of capital products/hardware/gear (barring second-hand apparatus); or − against pre-usable/pre-joining costs (counting installments of lease and so on.).
  - Government endorsement to be gotten given the area is under the Government course.
  - The Press Note accommodated certain FDI proposition from nations of worry to be inspected by Competent Authorities, i.e., DIPP/Nodal Administrative Ministries/Departments. Be that as it may, a relating change has not been told in FEMA 20(R)(1).

Foreign Direct Investment (FDI) in India is depended upon to turn out to be basically following the use of progressing Government of India (GOI) exercises, including the Goods and Services Tax (GST) related changes, authorizing and execution of the Insolvency and Bankruptcy Code (IBC), demonetization, and other straightforwardness of cooperating changes took off starting late by the central government. These progressions have helped India's image as a favored objective for outside endeavor, with various parts being totally open to remote examiners for making hypotheses without any imprisonments. These progressions realized India, for the plain first time, figuring in the best 100 in the World Bank's 'Effortlessness of Doing Business' overall rankings, on the back of kept up business changes by the Narendra Modi-drove government. The World Bank's report furthermore sees India as one of the fundamental 10 improvers in a year back's examination, having completed changes in eight out of 10 'Cooperating's pointers. On the "division to edges metric," India's score has in like manner seen a colossal skip, which reflects upgrades in India's business organization in the latest year itself. The best in class outside direct hypothesis system (FDI course of action) 2018 presents another such opportunity to moreover bolster monetary pro certainty.[5]

This highlights some of the key changes that may be considered to the existing FDI policy:

- **Real Estate Business**: Starting at now, the FDI procedure portrays a 'land business' as "overseeing in land and unfazed property with the end goal of obtaining advantage or winning pay ". Regardless, the articulation "overseeing in land and resolute property with the end goal of getting advantage or obtaining pay therefore" has not been described in the FDI procedure. It is as needs be unclear with reference to whether a sporadic trade of offer of fearless property by an outside had and controlled association whose crucial dissents under the update of connection does not deal in land and courageous property, would be proportionate to a land business. The term 'overseeing' may be extended just to activity that is in the traditional course of business for an association i.e., permitted by the basic articles stipulation of the update of relationship of such an association. Along these lines, it is suggested that the Department of Industrial Policy and Promotion (DIPP) adjusts the FDI system to clear up that an adventitious idea of passionate property by an 'outside asserted' and 'remote controlled' Indian association, busy with a development under the customized course whose rule objects does not oversee land and consistent property, would not be proportionate to be busy with the 'Land business'.
- **'E-commerce Entity'**: Presently, it isn't clear whether an association combined under the Companies Act 1956 or the Companies Act 2013, asserted and constrained by a man occupant in India, having tied down outside endeavor of under 50 percent (which would not qualify as a web business substance under the FDI Policy) can shoulder on the stock based model of electronic business. The DIPP may address the FDI way to deal with light up in the matter of whether an association that is guaranteed and constrained by a man occupant in India and completing a stock based model of electronic business is permitted to have remote hypothesis of less than 50 percent of its capital.
- **Sale of Intangible Goods and Services**: DIPP may correct the FDI Policy to clear up that the FDI Policy just limits offer of bundled product and endeavors through electronic business practices and not an unadulterated idea of organizations as a stay singular meander. A sensible significance of 'advantage' should be given in the FDI way to deal with decide whether a course of action of tricky product online would be considered as 'game plan of organizations' or 'Closeout of Intangible items'.
- **Insurance Sector Reforms**: In perspective on the current FDI Policy, FDI in a constrained risk organization (LLP) that is locked in or proposed to take part in areas where 100 percent FDI isn't allowed, for example, the protection segment business, may not be reasonable under the current FDI Policy as FDI in a LLP is permitted just

in those divisions where 100 percent FDI is permitted under the programmed course. As of late, the Insurance Regulatory and Development Authority (IRDA) told the Insurance Regulatory and Development Authority (Investment by Private Equity Funds in Indian Insurance Companies) Guidelines 2017 wherein private value finances that propose to contribute as "advertisers" in the Guidelines are disallowed from putting legitimately in an Indian insurance agency and the venture needs to directed by means of a unique reason vehicle (SPV). The Guidelines necessitates that the SPV be either an organization enlisted under the Companies Act, 2013 or a LLP enrolled under the Limited Liability Partnership Act, 2008.

In perspective on the rules, "outside Investment in protection part through use of LLPs ought to be explicitly allowed subject to the rules discharged by IRDA" Secondly, the FDI approach viably applies the equivalent 49 percent programmed course top for FDI in an insurance agency and middle people, for example, a protection merchant, regardless of insurance agencies and protection specialists undertaking various exercises, and insurance agencies being liable to more prominent examination. Protection agents represent their customers and not for insurance agencies and have a guardian obligation towards their customers. Likewise, comparative FDI treatment of an insurance agency getting and contributing open assets and a protection intermediary is neither justified nor required. DIPP ought to consider changing the FDI approach to accommodate 100 percent FDI for protection dealers.

Government Initiatives

- In January 2018, Government of India enabled outside carriers to put resources into Air India up to 49 percent with government endorsement. The speculation can’t surpass 49 percent straightforwardly or by implication.
- No government endorsement will be required for FDI up to a degree of 100 percent in Real Estate Broking Services.
- In September 2017, the Government of India requested that the states center around fortifying single window freedom framework for optimizing endorsement forms, so as to expand Japanese interests in India.
- The Ministry of Commerce and Industry, Government of India has facilitated the endorsement component for remote direct venture (FDI) recommendations by getting rid of the endorsement of Department of Revenue and ordering freedom of all proposition requiring endorsement inside 10 weeks after the receipt of utilization.
- The Government of India is in chats without breaking a sweat remote direct venture (FDI) in barrier under the programmed course to 51 percent from the current 49 percent, so as to give a lift to the Make in India activity and to create work.
- In January 2018, Government of India permitted 100 percent FDI in single brand retail through programmed course.

Recent Investment and Developments

India emerged as the top recipient of Greenfield FDI Inflows from the Commonwealth, as per a trade review released by The Commonwealth in 2018.

Some of the recent significant FDI announcements are as follows:

- In June 2018, Idea’s intrigue for 100 percent FDI was affirmed by Department of Telecommunication (DoT) trailed by its Indian merger with Vodafone making Vodafone Idea the biggest telecom administrator in India.
- In May 2018, Walmart gained a 77 percent stake in Flipkart for a thought of US$ 16 billion.

- In February 2018, Ikea declared its arrangements to contribute up to Rs 4,000 crore (US$ 612 million) in the territory of Maharashtra to set up multi-group stores and experience focuses.
- In November 2017, 39 MoUs were marked for speculation of Rs 4,000-5,000 crore (US$ 612-765 million) in the province of North-East area of India.
- In December 2017, the Department of Industrial Policy and Promotion (DIPP) endorsed FDI proposition of Damro Furniture and Super Infotech Solutions in retail segment, while Department of Economic Affairs, Ministry of Finance affirmed two FDI recommendations worth Rs 532 crore (US$ 81.4 million).
- The Department of Economic Affairs, Government of India, shut three outside direct speculation (FDI) recommendations prompting an all-out remote venture worth Rs 24.56 crore (US$ 3.80 million) in October 2017.
- Kathmandu based combination, CG Group is hoping to contribute Rs 1,000 crore (US$ 155.97 million) in India by 2020 in its sustenance and drink business, expressed Mr. Varun Choudhary, Executive Director, CG Corp Global.
- International Finance Corporation (IFC), the speculation arm of the World Bank Group, is intending to contribute about US$ 6 billion through 2022 of every few supportable and sustainable power source programs in India.

Conclusions

The ammendment including changes identified with advancement of different segments, viz. SBRT, Air Transport Services proposed vide the Press Note are presently compelling. The hotly anticipated relaxations, particularly in SBRT, are a positive change and could upgrade outside inflows into India. To reason that, the FDI strategy 2018 presents a great chance to ride on the ongoing flood of changes started by the Modi government. It is trusted that FDI strategy 2018 will be financial specialist neighborly and energize remote interests in India. The Prime Minister Narendra Modi has repeated numerous a period that India is prepared for business and open to speculations and his plan of "change, perform, change has just observed India draw in uncommon dimensions of FDI. With national objectives set a lot higher and further changes in the pipeline to make India a significantly progressively alluring goal for FDI, the street ahead appears to be relentless for resurgent India.[6]

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A STUDY ON IMPACT OF MERGER OF CMC ON FINANCIAL PERFORMANCE OF TCS

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ABSTRACT

With the changing environment, many different tactics have been adopted by corporate sector to remain effective and to surge ahead in the global corporate world. By the way of mergers and acquisitions, companies can achieve significant growth in their operations, minimize their expenses to a considerable extent and also competition is reduced because merger eliminates competitors from the industry. In this research paper, researchers have examined the impact of merger TCS and CMC. CMC was a subsidiary company of TCS. For better harmony of their business operation, TCS decided to merge its Business with CMC.To analysis the impact of the merger of TCS and CMC, ratio analysis and paired t-test method is used. Reason to examine this merger is to know whether it is beneficial enough for TCS or not. The study reveals that the TCS has choose befitted partner to merger with as financial performance of TCS was improved post-merger in terms of profitability, liquidity and per share performances except for Earning retention as it was declined post-merger.

KEYWORDS: *Financial Performance, Merger, Paired t-test, TCS, CMC.*

Introduction

Corporate world always tries to enhance their business by either internally expanding their operations, establishing new units or externally by merger and acquisition, joint ventures and takeover for corporate restructuring. Merger is most viewed option in India to strengthen company's position among its competitors and to increased long term profitability. Merger is looked as an immediate mode for external growth in the globalisation. Merger and acquisition are the corporate approach that involves purchasing, selling or combining different companies with an aim to obtain rapid growth. But decision on merger and acquisition is not that easy to take, it involves some fact such as current status of business, present market scenario, threats to the business and future opportunities. In India, amalgamation of business operation has two popular classifications.

- Amalgamation in nature of merger
- Amalgamation in nature of purchase

In this research paper, researchers have examined merger between TCS and CMC. To understate it, first one must have information about concept of merger and its classification.

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Concept of Merger

Merger is identified as a corporate strategy to combine different companies into single entity of a company in order to combine their business operations. In simple way, merger can be defined as a mean unification of two market players into one single entity. Following is the classification of merger.

- **Horizontal Merger** involves combination of two firms having same industry, product or service and market.
- **Vertical Merger** involves two firms operating at different level within same industry's supply chain to combine their operation.
- **Conglomerate Merger** involves firms which have different business operation from each other.
- **Congeneric Merger** involves firm having same industry but have different products or services.
- **Market Extension** involves firms having same industry, same product but in different market

There are more classifications of merger from legal prospective such as short form merger, statutory merger, subsidiary merger, merger of equals etc.

Payment of Merger and Acquisition

- Via purchase of assets of company
- Via exchange of shares for assets of company
- Via purchasing common shares of company
- Via exchanging shares of purchasing company to shares of selling company

Why Companies Goes for Merger and Acquisition

- To get benefits of financial synergy such as low cost of capital
- To target companies which are under valued
- To get economies of scale
- To improve the performance of company
- To get accelerate growth of market
- To diversify product and market for high growth
- To get tax benefits
- To redesign strategies and technological change
- To diversify risk
- To enhance reputation
- To reduce competition
- To get access to new brands of market

Reason Why a Merger Fails

- If a merger is **poor strategic fit** as if it has wide difference between objectives and strategic of company, a merger fails.
- If planning and design of **integration is improper or faulty**, it can lead to failure of merger.
- If due diligence is inadequate, it leads to failure of merger because it is the crux of the entire strategy.
- If company has **too much optimistic approach** for project, it can leads to bad decision making which ultimately causes failure of merger.

Company Information

Information	TCS	CMC
Types	Public NSE: TCS BSE: 532540	Public NSE: CMC BSE: 517326
Industry	IT services	IT services
Foundation	1968	1974
Head quarters	Mumbai	New Delhi
Key People	Rajesh Gopinathan (CEO)	R. Ramanan (Last CEO & M.D.)
Product	IT service, Consultancy and Business solution	IT service, Consultancy and Business solution
Website	www.tcs.com	www.cmcltd.com

Motives behind TCS – CMC Merger

TCS has mention motives behind merger with its subsidiary company CMC limited in its press released.

- For a rationalised structure
- For greater financial strength and flexibility
- For enhanced research
- For more focused operational efforts

Reason behind TCS – CMC Merger

- To achieve economies of scale
- To standardized and simplified business process
- To improved productivity

Financial and Non-financial Terms of TCS – CMC Merger

At the time of merging with TCS, CMC had 11,000 employees and its consolidated revenue for third quarter (30th September, 2014) was Rs, 616.69 crore with net profit of Rs 76 crore. The consolidated revenue of TCS, for the quarter ended September 30, 2014, was Rs. 23,816.48 Crore, with profit after tax of Rs. 5,244.28 Crore based on Indian GAAP.

Purchase consideration was paid in shares for which shareholders of CMC received 79 equity shares of rs.1 each of TCS for 100 equity shares of rs.10 each of CMC.

Review of Literature

Badreldin, A. and Kalhoefer, c. (2009) in their research paper titled "the effect of mergers and acquisition on bank performance of Egypt" examined performance of Egyptian banks with which have undergone mergers and acquisition by calculating return on equity using the basic ROE scheme. In which is concluded that not all of Egyptian banks shows significant improvement in pre and post mergers and acquisition. This shows that mergers do not have clear effect on profitability of banks in Egypt.

Mahesh, R. and Prasad, D. (2012) conducted a case study on "Post Merger and Acquisition Financial Performance Analysis: A Case Study of Selected Indian Airline Companies" to know whether the Indian airline companies have achieved financial performance efficiency forpost-merger& acquisition time period with the help of profitability, leverage, liquidity, and capital market standards and ratios. Paired t-test has been performed to determine the significance differences. This study shows that there is no improvement post-merger financial performance of selected airline companies.

Deo, M. and Shah, A. (2012) in their event study "testing Hubris Hypothesis of Mergers and Acquisition: Evidence from India" examined short-term market response to merger announcements in the Indian banking and information technology industry. Findings show that the shareholders of the bidding firms have incurred loss on merger announcements did not hold well in the Indian perspective. Also bidding firms did not fall in deficit from the merger deals which conclude mergers and acquisitions cannot be seen as a risky investment for their shareholders.

Research Gap

Many researchers have conducted studies on mergers in banking and pharmaceutical but there are lack of studies for IT sector. Also fewer case studies are available to understand impact of merger on financial performance after the year 2010.

Research Objective

- To evaluate the impact of merger on financial performance on TCS during the study period.
- To understand whether this merger is beneficial to TCS or not.

Hypothesis

H_0: There is no significant difference between pre-merger and post-merger financial performance of TCS.

H_1: There is a significant difference between pre-merger and post-merger financial performance of TCS.

Research Methodology

For the purpose of this study, secondary data has been used. Main source of this research are from annual reports of TCS and CMC. Also some of the ratios are collected from moneycontrol.com. Ratios are compared with pre and post-merger analysis. For statistical analysis researchers have used mean, standard deviation and tested with the help of paired t-test trough MS Excel. For this research, researchers have excluded the year of the merger of TCS – CMC. The study period for this study is 2 years before and 2 years after the merger of TCS-CMC. The researchers have tried to provide brief idea about the impact of CMC merger on TCS.

Significance of the Research

The study which we have done is significant and efficient as it has given us a knowledge and experience about the merger of TCS and CMC and what was its impact on the financial performance on TCS.

Data analysis and Interpretation

Table 1: Profile of Financial Ratio of TCS & CMC for Pre-merger & Post-merger

Ratios	Pre Merger						Post Merger	
	2013-14		2012-13		2013-14	2012-13	2016-17	2015-16
	TCS	CMC	TCS	CMC	TOTAL	TOTAL	TCS	TCS
Gross Profit Margin	31.32	20.56	27.88	17.52	51.88	45.4	27.52	29.57
Net profit Margin	28.56	27.19	26.4	17.63	55.75	44.03	25.51	26.64
R.O.C.E.	40.74	29.1	38.35	22.69	69.84	61.04	29.91	38.16
R.O.A	32.07	22.05	29.72	16.57	54.12	46.29	26.35	29.46
Current Ratio	2.84	2.39	2.43	2.05	5.23	4.48	6.41	3.01
Quick Ratio	2.84	2.37	2.43	2.01	5.21	4.44	6.41	3.01
Earning Retention	66.08	78.94	66.33	73.28	145.02	139.61	61.27	62.55
EPS	94.15	106.8	65.22	65.47	200.95	130.69	120.04	116.13
Net Profit per Share	94.32	106.8	65.33	65.47	201.12	130.8	120.07	116.13
Dividend per Share	32	22.5	22	17.5	54.5	39.5	47	43.5

Source: www.moneycontrol.com

Table 2: Mean and Standard Deviation of Pre-merger and Post-merger Ratios of Combined

Ratios	Pre Merger		Post Merger		t-test
	Mean	S.D	Mean	S.D.	
Gross Profit Margin	24.32	6.37838	28.545	1.44957	0.13314163
Net Profit Margin	24.945	4.957637	26.075	0.79903	0.16775834
Return on Capital Employed	32.72	8.361072	34.035	5.83363	0.16874636
Return on Assets	25.1025	7.117787	27.905	2.1991	0.15313394
Current Ratio	2.4275	0.323561	4.71	2.40416	0.9306083
Quick Ratio	2.4125	0.340037	4.71	2.40416	0.94446731
Earning Retention	71.1575	6.168686	61.91	0.9051	0.02646932
Earnings per Share	82.91	20.92972	118.085	2.76479	0.38665148
Net profit per Share	82.98	20.92933	118.1	2.786	0.38600636
Dividend per Share	23.5	6.096447	45.25	2.47487	0.81191652

Source: www.moneycontrol.com

Interpretation

Table 1 shows various financial ratios of TCS and CMC limited. Also to calculate mean we have combined ratios of TCS and CMC for the year 2012-13 and 2013-14. In profitability indicators, Ratios of Gross profit margin, Net profit margin, Return on capital employed and Return on asset shows significant improvement post-merger of mean value 24.32 vs 28.545, 24.945 vs 26.075 ,32.72 vs 34.035 and 25.1025 vs 27.905 respectively. This indicates positive improvement during post-merger time period which shows that merger has positive effect on profitability. For this H_0 (null hypothesis) is rejected showing that merger has significant difference on profitability performance. In liquidity indicators, Ratios Current ratio and Quick ratio shows significant improvement post-merger of mean value 2.4275 vs 4.71 and 2.4125 vs 4.71 respectively which shows positive but earning retention shows negative impact post-merger as 71.1575 vs 61.91. Except for earning retention H_0 is rejected as both ratios shows positive effect. Per share ratios also shows positive impact of merger as they are also higher in compared to pre-merger. Post-merger Earnings per share, Net Profit per share and Dividend per share are quite higher of 82.91 vs 118.085, 82.98 vs 118.1 and 23.5 vs 45.25 respectively which is a sign of positive impact of merger on market position of TCS. For per share ratios H_0 is also rejected as it also shows positive improvement.

Major Findings

- It has been found that ratios which show profitability have post-merger positive improvement in compared to pre-merger financial position of both companies.
- Liquidity ratios except Earnings retention also show positive impact on post-merger liquidity position of TCS in compared to pre-merger position of both companies.
- Same situation is in per share ratios as they are also positively improved in compared to pre-merger financial position of TCS and CMC.

Conclusion

Overall study shows that TCS has taken right decision of the financial position of company by merging with its subsidiary company CMC limited as it has help to gain stronger position in IT and software sector. Merger of TCS and CMC has Positive impact on financial performance of TCS which clearly shows that TCS have gained beneficial except retaining earnings post-merger but it is possible to get positive results in later years as this study is based on only two years. Therefore, it is concluded that TCS has positive effect on financial performance after merging with CMC.

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FINANCIAL LEVERAGE, EARNINGS AND DIVIDEND: AN EMPIRICAL ANALYSIS OF SELECTED STEEL COMPANIES IN INDIA

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ABSTRACT

An attempt has been made to analysis the relationship between financial leverage and earnings and dividend policy of the selected five steel companies of India. For this study secondary data have been used and taken from annual reports of respective companies and ACE-EQUITY database. Study period was of Ten years data from 2004-05 to 2017-18. It is seen from the calculation of correlation matrix that DPS has significant and positive relation with ROCE, DPR and Ke DPS has negative and insignificant relation with cost of debt. The result of regression that independent variable DPS, EPS, DPR, Kd and ke have positive and insignificant effect on DPS, whereas DPS has been negatively affected by degree of financial leverage. Combine effect of independent variables has been 0.932 on DPS which means that the effect is 93.20% on dependent variable.

KEYWORDS: *DPS, EPS, DPR, Kd and ke, Financial Leverage, Dividend, Earnings.*

Introduction

Financial Leverage, Earning and Dividend: Capital structure consists of Debt and equity. Equity capital is the owner capital and debt capital is borrowed capital with fixed rate of interest or dividend. When we use the debt capital with fixed rate of charges in capital structure is known as financial leverage. In short presence of debt capital bearing fixed charges in capital structure is known as financial leverage. Borrowed capital is the cheaper source of capital because tax benefits. The cost of debt is also lower than the cost equity because of tax benefits. Hence usage the borrowed capital in capital structure lowers the total cost of capital and increases the value of the firm. The Now if a company follows this practice its net return will be attributable to the low base of equity shareholders (lower base being due to the increase in financial leverage). As result of lower base of equity in capital structure the earning for shareholders increase. This is possible only when the business environment is favourable and positive. If the business environment is negative then this turns to be a dangerous thing for company. If the company is not able to earn more than the cost of capital then it becomes adverse for the firm. But if the business environment is positive and return is more than cost of capital EPS increases with increase of financial leverage. It means that the residual return over fixed charges and preference dividend go to the preference shareholders. However, during the

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period of adversity when the company is not in a position to earn greater than the cost of equity and EPS, instead of increase, will actually decrease, with the increase in the financial leverage. Higher earnings would result in higher earnings per share and dividend, on the contrary if financial leverage decrease, it decreases earning per share and dividend per share.

Profile of Steel Industry

Steel is one amongst the foremost vital merchandise of the trendy world and is of strategic importance for any industrial nation. From construction, industrial machinery to shopper merchandise, steel finds a good form of applications. Therefore industry plays a very important role in development of nation and is taken into account because the backbone of economy. The amount of per capita consumption of steel is a very important determinant of the socio-economic development of the country. India is that the second quickest growing nation among prime 10 steel manufacturing countries within the world. Steel contributes to almost a pair of % of India's gross domestic product (GDP) and employs over six hundred thousand folks. The Indian industry is split into primary and secondary sectors, occupation to completely different market segments. The first sector contains many massive integrated steel suppliers manufacturing billets, slabs and hot rolled coils. The secondary sector involves tiny units centered on the assembly of added merchandise like cold rolled coils, galvanized coils, angles, columns, beams and alternative re-rollers, and sponge iron units. India is that the fourth largest producer of steel within the world accounting for production of eighty one million tons of steel throughout FY14 and additionally holds the third position in consumption of steel. Among sector wise consumption, construction is prime overwhelming sector accounting for around sixty three of total steel consumption within the country.

Review of Literature

The researcher has presented review of literature which are very significant and relevance to the study:

Dinabandhu Bag (2012) did work on "Market leverage of real estate firms in India: Empirical Study" This research paper explains the effect of firm specific attributes and external market or macroeconomic factors on market leverage. The sample size of 40 property companies list in India. The study covers times period of 8 years from 2005 to 2012. The study concludes that previous leverage, operational efficiency, growth option, change in working capital and cost of funds have positive and significant effect on current market leverage. The paper also concluded that the transparency in property markets and accuracy in financial disclosure could support property firms' access capital and main their leverage.

Manoj Anand (2002) wrote research paper on "Corporate Finance Practices in India: A Survey. This paper explains the study of 81 CFO of India to know about heir corporate fiancé practices Vis-À-Vis capital budgeting decisions, Cost of capital, capital structure decision and dividend policy decision. Researcher has analyzed the responses by the characteristics of firm like firm size, profitability, leverage, P/E ratio, CFO's education and the sector. The study reveals that corporate fiancé practice differs with size of the firm.

Mr. Manjunatha.K (2013) worked on "Impact of Debt –Equity and Dividend payout Ratio on the value of the firm." Researcher has selected sample of 29 firms list on BSE and NSE which covers time period of 2000-01 to 2004-05. The study is based on secondary data. The study found that there is no significant effect of dividend Payout and debt-equity ratio on Share price. It is also concluded that debt-equity and share prices do not have correlationship. Only companies out of 29 companies have the relationship between dividend payout and return on equity.

Anupam De, (2011), "Application of the Factor Analysis on the Financial Ratios and Validation of the Results by the Cluster Analysis: An Empirical Study on the Indian Cement Industry. Secondary data of 38 companies were selected which covers the study period of 10 years from 1999-2000 to 2008-2009. He used factorial analysis to classify the selected variables. Some variables with low correlation were excluded in factorial analysis. Factorial analysis identified 8 categories of variables. These factors account for about 89% of the total variance, which can be considered as excellent.

Dr. Aurangzeb and Tasfoura Dilawer (2012) worked on “Earning Management and Dividend Policy: Evidence from Pakistani Textile Industry” The researcher has taken data of textiles industry from Karachi Stock Exchange (KSE) which covers the period of 1966 to 2008. The researcher used dividend payout ratio as dependent and earning management as independent variable. They used three variables as control variables such as Return on equity, Size of the firm and self finance ratio. The study found negative relationship between dividend payout ratio and earning management and all control variables.

Asif et al (2011) has studied the relation between dividend policy and financial leverage. The data of 403 Pakistani listed companies have been obtained which covers the period of 2002 to 2008. The study has considered dividend per share as dependent and other three variables such as debt ratio, change in earning and dividend yield as independent variable. The study concluded that DPS has significant effect on leverage and Dividend yield according to random effect model. And all variables have positive coefficient except debt ratio according to fixed effect model.

Mahira Rafique (2012) studied Factors Affecting Dividend Payout: Evidence from Listed Non-Financial Firms of Karachi Stock Exchange. The researcher has collected data of non-financial firms from listed in the KSE100 Index which covers the time period of six years from 2005 to 2010. The researcher has used regression model to the effect of independent variables such as, Firm Size, Growth, Profitability and Corporate Tax & Financial Leverage on DPR. The result of the regression is that Corporate Tax and Firm’s Size had significant relationship with Dividend Payout and Earnings, Growth, Profitability and Financial leverage have been insignificant to the DPR.

La Ode Sumail et al (2013) worked on Relationship between Insider Ownership and Sales Growth with Dividend Policy and Leverage (Study on Manufacturing Company in Indonesia Stock Exchange) The study was based on secondary data collected from the Indonesia Stock Exchange which covers the period of 5 years from 2007-201. 22 companies were selected for study. The study concluded that insider ownership has significant effect on leverage, (growth in sales has insignificant impact on leverage (3) dividend policy has been significantly impacted by insider ownership and it has also strengthening the agency theory.

Muhammad Usaman Javed (2002) did research on Impact of financial leverage on divided policy: Case of Karachi stock exchange 30 index. The study period covers from 2005 to 2010.Increase in financial leverage have negative effect on dividend per share. This happened due to heavy amount of debt.

Asia (2011) has written a paper on “Examine the relationship between the financial leverage on the dividend policy of the Karachi stock exchange -100 index. The paper explained that dependent variable (Dividend per share) and independent variable (dividend yield, debt ratio, and the change in the earning). The result of the research showed that debt ratio of the company is not significant with dividend policy, whereas; dividend yields have positive effect on the DPS.

Chandrakumar Mangalam (2010) examined the impact of financial leverage on the profitability of the Indian firms. The researcher has studied the effect of operating leverage, financial leverage and combines leverage on EPS. The study found significant relationship between Degree of operating leverage, Degree of Financial leverage and combined leverage. The study concluded that there is a positive relationship between degree of financial leverage and EPS.

S. Franklin John and K. Muthusamy (2010), worked on "Leverage, Growth and Profitability as Determinants of Dividend Payout Ratio-Evidence from Indian Paper Industry" The research paper is based on Linter dividend model. The researchers have carried out their research in paper industry. They identified some variables who determined dividend policy such as Growth in sales, Earnings per share, Price earnings ratio, Market value to book value, Cash flow, Leverage, Liquidity and Return on assets. These variables are assumed to be independent variables while dividend payout has been assumed as dependent variable. The study concluded that leverage is largely associated with dividend policy.

Fakhra Malik et al (2013) made a study on "Factors Influencing Corporate Dividend Payout Decisions of Financial and Non-Financial Firms" secondary of Karachi stock Exchange-100 index were used which covered the period of 2007 to 2009. Researchers have used panel data of 100 financial and non-financial firms of Karachi Stock exchange. The study concluded that timing of declaration dividend is important for reputed firms. The study also concluded that payment of dividend is determined by the profitability, liquidity, earning per share and size of the firm positively. Whereas firm with growth in sales has negative effect on payment of dividend and Financial leverage has also negative impact on payment of dividend.

Wasfi Al Troudi and Maysa'a Milhem (2013) did researcher on Cash dividends, retained earnings and stock prices: Evidence from Jordan. Industrial firms of Amman stock exchange have been selected for the study which covers the period of 2005 to 2010. The study was made to examine the relationship between cash dividends, retained earnings and the stock prices. The research resulted that there was positive and significant relationship between cash dividends, retained earnings, earning per share and stock price. However stock price is positively related with insignificant association with financial leverage. Power and MacDonald (1995) examined the effect of dividends and retained earnings on the prices of shares. They have found there is a relationship amongst the prices of shares; dividend and retained earnings.

Objectives

In order to justify above title following objectives were laid down.

- To study the raising pattern of finance and financial leverage practice of five selected steel companies.
- To examine the impact of financial leverage on EPS of five selected companies.
- To assess the inter relationship between degree of financial leverage (DFL), earnings per share (EPS) and dividend per share (DPS)
- To examine the effect of EPS, DPR, Kd, Ke and ROCE on DPS

Research Methodology

- **Collection of Data:** The data of selected five steel companies have been collected from the annual reports of the company and money control. The names of companies are **Bhushan Steel Industry Ltd**., **Essar Steel Industry Ltd.**, **Jindal Stainless Ltd., Steel Authority of India Ltd., and Tata Steel Ltd.** The data collected from this source have been structured and compiled appropriately and as per the need of study.
- **Period of Study:** The present study covers a period of eight years from 2004-05 to 2017-18.
- **Techniques of Analysis:** The study has been made by converting the collected data in to relative measures such as ratios, percentage rather than absolute one. For analyzing the degree of association between DFL, EPS and DPS and financial measures, statistical technique of Pearson's correlation analysis has been used to judge whether the calculated correlation coefficient are significant or not.

Empirical Analysis

Table 1: Computation of DFL, EPS, DPS, DIP Ratio, Cost of Debt Cost of Equity and Rate of Return on Investment

Year	DLF	EPS	DPS	DPR	Interest Rate	Average Tax Rate	Kd	Ke	ROCE %
2004-05	1.29	30.23	4.24	11.61	8.25	16.92	6.85	3.90	20.50
2005-06	1.35	26.37	3.82	12.17	6.59	8.61	6.02	2.92	13.06
2006-07	1.33	38.18	4.62	10.63	5.88	18.85	4.77	3.17	13.10
2007-08	1.4	40.22	4.84	12.13	6.81	25.76	5.06	2.93	10.52
2008-09	1.58	29.94	4.22	8.58	5.76	27.91	4.15	1.63	4.68
2009-10	3.77	58.45	2.76	7.13	4.47	38.32	2.76	1.37	6.24
2010-11	0.65	29.38	2.98	7.61	4.22	23.68	3.22	0.50	4.90
2011-12	0.27	23.03	2.9	8.35	6.09	26.81	4.46	0.49	3.50
2012-13	1.02	9.64	2.1	10.93	6.45	10.39	5.78	0.40	-0.68
2013-14	4.05	0.91	2.5	13.52	7.87	25.19	5.89	0.53	1.32
2014-15	2.36	5.59	2.00	10.31	8.05	-0.96	8.13	0.17	6.15
2015-16	-0.02	13.71	1.60	2.27	9.45	187.13	-8.24	0.16	-1.11
2016-17	1.59	10.58	2.00	2.99	38.57	-17.40	45.28	0.21	4.56
2017-18	-4.01	8.09	2.00	3.13	51.77	9.83	46.68	0.17	4.938

Notes and Explanations

- DFL = Degree of Financial Leverage = EBIT / EBT
- EPS = EAT / No. of Equity Shares.
- DPS = Dividend / No. of Equity Shares.
- DPR Ratio = DPS / EPS x 100
- Rate of Interest = (Interest / Long-term debt) X 100
- Interest on debt capital is an allowable expenditure for income tax purpose and it qualifies for deduction in computing taxable income. So it reduces effective cost of debt in the following way: Cost of debt (%) = Rate of Interest (1 - tax rate).
- Tax rate varied over the years with the changes in Tax Legislations. Tax rate being not available has been computed by approximating it to be equivalent of tax provisions. So Tax rate has been calculated by using **formula (provision for tax/ Earning before tax)***100 which give approximate figure of tax rate.
- The return expected by the equity shareholders may be referred to as cost of equity. There are various models for its computation. But in real term a firm has to incur cost in respect of equity shares in the form of dividend payment. So the most suitable formula is : Cost of equity (%) = (Dividend / Equity or Net worth) x 100
- Rate of return on investment = (EAT / Total Capital Employed) x 100

Table 1 indicated the selected variable of DFL, EPS, DPR, Rate of interest, Average tax, Cost of Debt, Cost of Equity and ROCE. Financial leverage is used to magnify the return of shareholders. DLF is very good upto 2009-10 then after it got highly fluctuated. DLF is negative in the year of 2015-16 because EBIT was negative. It is also negative during the last year of the study period. Overall DLF shows very fluctuating trend. DLF was the best during the year of 2013-14 (4.05), 2009-10(3.77) and 2014-15(2.36).However for selected steel companies' position is not so much good. There is general propositions that higher is the DFL; greater is the ESP. DFL has very positive impact on EPS and DPS because both have been favourably. The DFL is less than one from 2010-11 to 2011-012 which is not good for the firms. It is also seen that higher degree of financial leverage (3.77) in year of 2009-10 has generated higher EPS (58.45) in the same year. However exception has also been seen that higher degree of financial leverage (4.05) in the year of 2013-14 lowered the EPS (0.91) which is abnormal for the steel industry. Dividend per share also depends on two things (1) Earning available to shareholders and (2) liquidity condition.

It is assumed that higher degree of financial leverage leads to higher amount of earning available and higher amount of dividend per share. It is also a fact that equity shareholders are being paid out of residual earning after paying to all parties. EPS shows downward trend during the study period. The EPS was the highest (58.45) and lowest (0.91) during the study period. EPS has been seen very well when DLF was more than one (1:00) indicating positive impact on EPS. EPS has gone down when DLF went to less than one. In some year it is seen negative. Steel industry is not very good in distributing dividend. It is seen from the above table that DPS remained Rs. 2;00 or closure to 2:00.Companies like Tata steel Bhushan ltd., Essar steel and steel authority of India ltd. have not declared dividend. Another significant aspect of financial leverage is cost of debt and Return on Investment. The difference between cost of debt and ROI is called residual income. It means that lower the cost of debt, higher will be the earning available to shareholders. Cost of debt is showing highly fluctuated trend during the study period. The cost of capital was the highest during the last years of study period (45.28%) and 46.68%) which means that steel companies have used more amount of debt. It is said that ROCE depends on the cost of capital. Higher the ROCE, lower the cost of capital. But in the selected steel companies it did not happen. There are some years where lower cost of capital (-8.24) did not generate higher amount of ROCE (-1.11).

During last two years the cost of debt is very higher and ROI is very lower establishing inverse relationship. The impact of financial leverage is based on effective average rate of tax. Is also hypothesized the higher the tax rate, lower is the cost of capital. Dividend payout ratio shows highly fluctuated trend during the study period. Dividend payout ratio is very low during the year of 2016-17 (2.99) and 2017-18(3.13). Lower percentage of dividend payout ratio indicates that the steel industry is retaining the earning and paying very less to shareholders. Most of selected companies have very bad dividend payout ratio and dividend per share ratio. However as per Gordon approach dividend payout ratio higher is desirable when ROCE is lower. In the years of 2011-12, 2012-13 and 2013-14 dividend policy is very good because it would have positive impact on stock price. However steel industry has the cost of equity lower than cost of debt which means that firm has depended mostly on long term debt. Here equity capital has become cheaper sources of capital.

Correlation Analysis of Financial Leverage, Earning and Dividend

Researcher has also calculated correlation to examine the relationship between DFL and EPS, DFL and DPS and EPS and DPS. The correlation has been presented in the following table 2.

Table 2: Relationships between DFL, EPS & DPS and Other Measures ROCE, DPR, K_d and K_e

		DLF	EPS	DPS	ROCE %	DPR	Kd	Ke
DLF	Pearson Correlation	1						
	Sig. (2-tailed)							
EPS	Pearson Correlation	0.254	1					
	Sig. (2-tailed)	0.381						
DPS	Pearson Correlation	0.180	0.645*	1				
	Sig. (2-tailed)	0.537	0.013					
ROCE %	Pearson Correlation	0.062	0.480	0.737**	1			
	Sig. (2-tailed)	0.833	0.082	0.003				
DPR	Pearson Correlation	0.537*	0.139	0.579*	0.426	1		
	Sig. (2-tailed)	0.048	0.635	0.030	0.129			
K_d	Pearson Correlation	-0.475	-0.359	-0.303	-0.016	-0.466	1	
	Sig. (2-tailed)	0.086	0.208	0.292	0.957	0.093		
K_e	Pearson Correlation	0.184	.0606*	0.895**	0.895**	0.557*	-0.274	1
	Sig. (2-tailed)	0.529	0.022	0.000	0.000	0.038	0.343	
*. Correlation is significant at the 0.05 level (2-tailed).								
**. Correlation is significant at the 0.01 level (2-tailed).								

Source: computed with the data obtained from table 2

Table 2 showed the co-efficient of correlation matrix between degrees of financial leverage, earning per share, dividend per share, rate of return on capital employed dividend payout ratio, cost of debt capital and cost of equity. Table -2 indicates that there is a positive correlation between degree of financial leverage and Earning per share (0.254), dividend per share (0.180), return on capital employed (0.062), dividend payout ratio (0.537) significant at 5% level. There is negative correlation between Degree of financial leverage and cost of debt and the relation is insignificant. There is a positive and significant correlation between dividend per share and earnings per share (0.654). There is also a positive and significant correlation between dividend per share and degree of financial leverage and dividend per share. Cost of equity has significant and positive correlation with earning per share, dividend per share (significant at 10%) return on capital employed (significant at 10%). Cost of equity is positive and significantly correlated with dividend per share.

Regression model: researcher has indentified some of the important variable which affects the dividend per share. The variables are dividend per share, dividend payout ratio, cost of debt, cost of equity, return on capital employed, and degree of financial leverage. The model is given below:

DPS=	**$ß_0$**	**+ $ß_1$(DFL)**	**+ $ß_2$(EPS)**	**+ $ß_3$(ROCE)**	**+ $ß_4$(DPR)**	**+ $ß_5$(K_D))**	**+ $ß_6$(K_e)**

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.932[a]	0.869	0.756	0.543
a. Predictors: (Constant), ROCE %, K_D, DLF, EPS, DPR, K_e				

Table 3 indicates Regression model summary. This model explains that adjusted R^2 is 0.756 and R^2 is 0.869. R square is adjusted to reflect the model's goodness of fit of the population. The net effect of this adjustment is to reduce the R square from 0.869 to 0.756 Standard error of model is 0.932. This is the standard deviation of actual value of Y (DPS) about the regression value of the estimated Y (DPS).

Table 4: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.702	6	2.284	7.720	.008[b]
	Residual	2.071	7	.296		
	Total	15.772	13			
a. Dependent Variable: DPS						
b. Predictors: (Constant), ROCE %, Kd, DLF, EPS, DPR, Ke						

Table 4 showed ANAOVA which indicates measures whether or not the equation represents a set of regression coefficient that, in total are statistically insignificance at 5% level of significance.

Table 5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	DPS	1.193	.683		1.746	.124
	DLF	-.090	.107	-.154	-.838	.430
	EPS	.021	.014	.300	1.417	.199
	DPR	.095	.071	.318	1.350	.219
	Kd	.008	.014	.117	.604	.565
	Ke	.728	.352	.886	2.066	.078
	ROCE %	-.060	.067	-.324	-.893	.402
a. Dependent Variable: DPS						

Table 5 is about the coefficient. In this table, the column headed “B” shows un standardized regression coefficient for the equation. The above table shows multiple regressions reflected by coefficient. The effect of ROCE and DLF found negative and insignificant. Whereas the effect of EPS, DPR, cost of debt and cost of equity found positive and insignificant. Thus it is believed that dividend per share has not been significantly affected by degree of financial leverage, earning per share, dividend payout ratio, cost of debt, cost of equity and return on capital employed.

Conclusion

Researcher has taken all the variable of degree of financial leverage, earning per share, dividend per share, return on capital employed, dividend payout ratio, cost of debt, and cost of equity capital from annual reports and moneycontro.com. The data been tabulated appropriately for the purpose of analysis. The analysis of each tables, which contains the variables of degree of financial leverage, earning per share, dividend per share, return on capital employed, dividend payout ratio, cost of debt, and cost of equity capital has been made by using different techniques like accounting ratio and statistical tools like ‘multiple regression, t test, correlation, co-efficient of correlation, mean, standard deviation and variance. The researcher has calculated various variables for leverage, earning and dividend such as degree of financial leverage for leverage, Earning per share for earning and dividend per share & Dividend pay our ratio for dividend. The relation has also been established between DFL and EPS, DFL and DPS and EPS and DPS. It is seen from the calculation of correlation matrix that DPS has significant and positive relation with ROCE, DPR and Ke DPS has negative and insignificant relation with cost of debt. The result of regression that independent variable DPS, EPS, DPR, Kd and ke have positive and insignificant effect on DPS, whereas DPS has been negatively affected by degree of financial leverage. Combine effect of independent variables has been 0.932 on DPS which means that the effect is 93.20% on dependent variable.

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CONCEPTUAL FRAMEWORK OF CLOUD ACCOUNTING

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ABSTRACT

Fast advancement of information technologies in recent years completely changed organizational processes and systems design. This is also from one of them, developed since 2006, i.e called cloud computing. This permitted a party virtualization of the system of organization, including some mechanism of the accounting information system. Thus it emerged and was operational zed at the organizational stage, cloud accounting [software]. The concept of cloud accounting originated in 2006 in foreign i.e New Zealand with Zero. Zero always consists from cloud-based accounting solution system; it was not evaluated or sold a traditional desktop computer version of its software of accounting. At present it is more demanded in India because of having Globalization, cloud accounting is the need of every organization because it is more flexible and its data can be traced or seen from anywhere, and all organization don't want to invest lots of money for establish proper set up and resources so they would like to work with cloud accounting without extending the hard disk storage or the version of their system the study of this topic will help to all the business man and students for understanding the benefit of cloud accounting.

KEYWORDS: *Cloud Accounting, Accounting Information System,* SAAS.

Introduction

It is the modern aspect of accounting or we can say that accounting on the air, Cloud accounting is a accounting software that is based on remote servers. Cloud accounting provides accounting efficiency to every business enterprise in a new generation similar to the SAAS (Software as a Service) tools of business model. Live Data is sent into "the cloud," where it does processing and after that data are returned to the user. All types of software application activities are performed off-site, not on the desktop of user. In the cloud computing, users access the software applications remotely without any wire connectivity through the Internet or other network via a cloud application service provider. Using cloud computing accounting software frees the big business from installation & maintains various software on each desktop computers. It also allows or permitted to staff in remote or several branch offices to see and access the same original data and on the same version of the same software.

Most application providers usually charge based on usage, compared to site license fees associated with habitual or conventional accounting software deployments. Accounting data backup and disaster recovery is generally a procedural step of your cloud computing accounting software.

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So why this thing is Called the Cloud?

If we think about the use of internet banking, every time we access or search this data, we're using the cloud. The cloud area is one of the common platforms to make data and software accessible by using internet anytime, anywhere, from any computer device. Your hard drive is not longer then central hub. What is the basic difference between traditional accounting and cloud accounting software?

There are a numerous key distinctions between cloud accounting and traditional site accounting. For one, cloud accounting is much better for flexibility point of view. Data of business accounting can be searched or accessed from anywhere in all over the world on any device with an Internet connection, instead on some select on-premises computers. Secondly, it is not similar like traditional accounting software, software of cloud accounting updates financial information within a short moment automatically and supply the financial reporting data in real-time as per our need. it means balances of business account are always correct & accurate and less errors take place during manual data entry process. Cloud accounting software is also easy to handle multiple-currency and multi-company transactions more competently.

On the world of premises, every time the firm growth rate is increasing, they bump into big software license and service costs which are always occur very high and new licenses fees for managing database system and other supportive relevant software. The firm always has to make heavy capital for purchasing new hardware, like servers. But by using cloud solutions, businesses do not get fixed with permanent, high cost equipment and licenses when your business deals are over and, similar like, there are no big spikes in costs when it elaborate a little.

Also, cloud accounting requires far less costly maintenance than its conventional matching part. The cloud provider provide complete backups and updates features automatically and no requirement to downloaded or installed on a company desktop.

Data Security with Cloud Accounting

Cloud accounting solution system provides high security (and we can say it more secure than our expectation) method of saving and storing important financial data than traditional software of accounting. For example a company Desktop or laptop with vital financial information may be damaged or stolen, which could lead to destroy any information. Cloud accounting solution, however, leaves no tracking of important financial data on the desktop of company, and use to that data in the cloud and this data are encrypted and totally protected with password.

Transferring data is also a easy task in cloud accounting, more than one people simply require access rights to the same desktop with their unique confidential passwords. Traditional methods often require spark drives to move data, which could be damaged or stolen. Last of all, cloud providers generally have backup servers in two or more locations. if one server network go downhill, still you can access to your important data. If the important Information related to finance are kept on-premises then it may be destroyed or damaged by fire or natural disaster, and may never be restored or recover.

Will Cloud Accounting save My Money?

Those Companies who use the system of cloud accounting need only less initial server infrastructure to save or store data, and Technical person have no need to maintain it or update the cloud accounting system quickly. Less additional expenses and no need to purchase new software it means huge savings for businesses. For the on-premises world it is the literal opposite. All time a firm grows, they bump into big software license and service costs as well as new licenses and other fees for database management system and other relevant software.

Literature Review

In India lots of work has been done only on cloud computing but In terms of practical research it involves identifying appropriate articles relevant with this topic, written by foreign authors Mr Romanian in 2011-2016, and interpretation to emphasize perspective for execution of cloud based accounting in the Romanian organizations.

Conclusion

After understanding the overall concept finally we find that every businessman may use which is based on cloud accounting software from any device or system with proper internet connectivity. Here the means of Online accounting refers small business owners mostly be connected to their data and their accountants. The software can combine with a entire eco-system of add-ons. It's measurable, less costly and easy to use. In the cloud, there is no requirement to install various software's and run other applications over a computer. Instead, you reimburse for the old software by charges monthly subscription.

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BOOK REVIEW
Dr. Siddhartha Sankar Saha & Dr. Mitrendu Narayan Roy
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QUALITY CONTROL PROCEDURES FOR STATUTORY FINANCIAL AUDIT: AN EMPIRICAL STUDY

Dr. Bikram Singh*

Introduction

A series of corporate scandals across the globe have shaken the foundation of investor trust in the transparency, honesty and accountability of corporations in the recent past. Inadequacies in quality control procedures for statutory financial audit actually paved the way for publication of falsified financial reports year after year. These financial irregularities eventually get the attention of the regulatory authorities and oversight agencies resulting in exposure of massive accounting fraud that calls for the company's demise. It has a far reaching impact not only on the stakeholders of that company but also to the financial markets and economy as a whole. The book titled *"Quality Control Procedures for Statutory Financial Audit: An Empirical Study"* is a significant endeavour conducting an exhaustive study in order to address the quality control procedures for statutory audit of financial statements in the backdrop of recent corporate accounting scandals and their irrevocable impact on the stakeholders.

It is known that financial decision of a large part of the society depends upon auditors' opinion. In order to meet the requirement of stakeholders, professional institutes and other regulatory bodies governing statutory audit operations in several countries across the globe have come up with several professional and ethical standards for maintaining quality of statutory audit of financial statement. Compliance with applicable professional and ethical standards and issuing report which is appropriate in particular circumstances is the basic pre–requisite of audit quality. Accounting firms formulate quality control policies and implement them for all of their professional engagements. Appropriate compliance with quality control policies by all the members of an accounting firm ensures quality of their engagement. Audit and assurance being one of the important professional engagements of a firm also comes under it purview. Other professional standards and applicable regulations also take pioneering role in controlling quality of statutory audit of financial statements. In this backdrop, the book has been designed primarily to address the following research issues: (a) adequacy of regulatory framework governing quality control procedures for statutory financial audit; (b) opinion of practising chartered accountants (CAs) on quality control procedures for statutory

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financial audit; (c) difference in their opinion from students pursuing chartered accountancy course; (d) impact of professional practice on the opinion of a person dealing with quality control procedures; (e) issues governing quality control procedures for statutory financial audit; (e) relationship between quality control procedures and overall audit quality. With a view to addressing those issues, the book comparatively analysed quality control framework in the USA, the UK and India and have taken into account the opinions of practising chartered accountants and students pursuing professional courses in Kolkata (India). Such analysis has been done to explore the impact of quality control policies and select audit procedures on quality control for statutory financial audit.

The current research in the book has used a wide range of materials from regulatory pronouncements, guidelines, rules, standards and acts to relevant books and research papers in this field. Moreover, perceptions of CAs and students pursuing chartered accountancy course have also been gathered in close-ended structured questionnaire constituting an important material for the study. Quality control procedures in the USA, the UK and India have been captured through a comparative analysis table. A few statistical tests, such as Chi-square test, Mann-Whitney test, Pearson's correlation coefficient and t-test have been used to analyse the primary data collected from respondents of the study.

The book has depicted that quality audit of financial statements performed by the statutory financial auditors ensures reliability and authenticity of financial statements in safeguarding stakeholders' interest. Hence, quality control procedure for statutory financial audit has been considered with utmost importance by regulatory authorities in developed and developing countries across the globe. The book has shown many facets of audit quality. A comprehensive framework for maintaining quality of financial statements has been proposed by the International Federation of Accountants (IFAC). Professional institutes of different countries including India under the IFAC have designed their quality control framework in that line. Quality control policies and procedures of an accounting firm are the most important aspect of the quality control framework. Quality control policies for an audit engagement are devised in accordance with quality control policies of the accounting firm. There are standards promulgated by the professional institutes that help the firm or engagement team in that respect.

The authors of the book have also observed that the regulatory frameworks governing quality control procedures of statutory financial audit in the USA, the UK and India are almost similar. However, as compared to the international standards set by the International Auditing and Assurance Standards Board (IAASB), the regulatory framework of the countries under consideration suffers from certain lacuna with respect to quality control procedures.

The authors have taken a good endeavour to analyse the opinions of CAs and students pursuing chartered accountancy course and the study shows that a number of issues, like scientific designing of quality control policies, education and training for the members of the firm, long association with audit client, engagement quality control review (EQCR), sufficiency and enforceability of auditing standards, limitations in time and scope of auditing, dependence of internal control mechanism of the company, participation of all members in audit planning, documentation of professional skepticism of statutory auditors, reporting compliance with applicable standards, management's control in appointment procedure, continuous learning programmes, cut throat competition in the accounting profession, have significant impact on quality control procedure for statutory financial audit. However, there is heterogeneity in the opinions of CAs and students with respect to quite a few issues governing quality control procedures. This divergence is caused probably due to differences in their level of knowledge and experience in the accounting profession.

The book finally has recommended a few measures in improving the quality control procedures for statutory financial audit especially in the Indian audit environment. While Indian regulators and professional institutes have taken some phenomenal steps in this regard, some gaps and inconsistencies still remain which are appropriately addressed in the book.

The authors of the book, Professor (Dr.) Siddhartha Sankar Saha, Professor of Commerce, University of Calcutta (India) and Dr. Mitrendu Narayan Roy, Assistant Professor of Commerce, Goenka College of Commerce and Business Administration (India) are prolific researchers in this field and they have published considerable number of research papers in the related areas in journals of national and international repute. Prof. Saha has more than 20 years of teaching experience in both UG and PG level. Moreover, Professor Saha has already contributed a few books on corporate accounting scandals and ethical responsibility of statutory auditors published by international publisher groups.

The book has primarily been written for the professionals in the field of accounting and auditing as it deals with their problems in controlling quality of statutory financial audit. In India, premier professional accounting bodies, like the Institute of Chartered Accountants of India (ICAI), the Institute of Cost Accountants of India (ICAI), the Institute of Company Secretaries of India (ICSI), and Govt. of India may also be benefitted about the outcome of the book for policy recommendation and modification of existing laws governing quality control policies and procedures. The book may also be beneficial to students pursuing the post graduation in commerce and business administration or students pursuing professional courses or the researchers in finance and control. It will give them an insight into the current state of quality control for statutory financial control and show them the path of further researches.

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21.	**Prof. Nageswar Rao**, VC, Indira Gandhi National Open University	**Delhi**
22.	**Prof. B Ramesh**, Goa University	**Goa**
23.	**Prof. K Eresi**, Bangalore University	**Bangalore**

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