

A Study Assessing The Impact Of Voluntary Adoption Of IFRS On The Comparability And Relevance Of Financial Information Of Listed Indian Companies.

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Abstract: As per the notification G.S.R 111(E) dated 16 February 2015 of the Ministry of Corporate Affairs of India, the Indian listed companies are required to comply with the IFRS converged Ind AS for the preparation of their financial statements and audit from the accounting periods commencing on or after 1st April 2016. However, few internationally listed companies were voluntarily reporting their financial statements as per IFRS along with the financial statements prepared as per Indian Generally Accepted Accounting Principles (IGAAP) before April 1, 2016. The researchers analysed the impact of this voluntary reporting of financial statements as per IFRS on the comparability and relevance of financial information in India. It was also analysed whether the value relevance of financial information for the investors is higher under IFRS than that of the information provided in financial statements prepared as per the Indian GAAP when they have to make decisions in the capital markets. The result of the research revealed a significant quantitative impact of IFRS on some of the selected accounting figures and ratios. It was also observed that IFRS had a positive effect on the value relevance of financial reporting.

Index Terms: Impact, International Financial Reporting Standards (IFRS), Indian GAAP, Financial Reporting, India.

1. INTRODUCTION

Every country around the world has its own accounting standards and principles which are followed for preparing accounting information in that country which are termed as the National GAAP (Generally Accepted Accounting Principles) of that country. These accounting standards and practices vary from country to country. The rise in international trade and flow of capital has led to an increase in global economic integration and internationalisation of financial markets. This led the companies to procure funds from overseas or foreign investors. Consequently, this also requires the Companies to prepare alternate set of financial statements as per a different set of accounting standards to address the information needs of their foreign investors or overseas financial markets. One set of financial statements are prepared as per the national standards to fulfil the regulatory requirements of the home country. Another set(s) is prepared as per the standards of the host country to meet the regulatory requirements of overseas financial markets/foreign investors. For example, if an Indian entity is listed at New York stock exchange, it has to prepare two set of financial statements. One set of statement in accordance with Indian GAAP and one set of statement as per US- GAAP. In addition to these is has to prepare a reconciliation statement. TO CIRCUMVENT THESE MULTIPLE REPORTING REQUIREMENTS, ACCOUNTANCY BODIES AROUND THE GLOBE WERE TRYING TO HARMONIZE VARIOUS NATIONAL ACCOUNTING SYSTEMS AND DEVELOP A SINGLE SET OF STANDARDS FOR FINANCIAL REPORTING WHICH WOULD BE RECOGNISED THROUGHOUT THE WORLD. THE SOLUTION CAME OUT TO BE INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) ISSUED

BY THE INTERNATIONAL ACCOUNTING STANDARDS BOARD (IASB). IFRS ARE NOW RECOGNIZED AS THE GLOBAL LANGUAGE OF FINANCIAL REPORTING WHICH ARE FAIR AND TRANSPARENT TO BOTH NATIONAL AS WELL AS FOREIGN STAKEHOLDERS. THESE STANDARDS HAVE MADE THE FINANCIAL INFORMATION PROVIDED BY THE COMPANIES EASILY COMPREHENSIBLE AND COMPARABLE GLOBALLY. Most of the countries are either adopting IFRS or converging their standards with the IFRS [1]. India also originally decided to adopt IFRS for the period commencing on or after April 1, 2011, but the deadline was deferred because of some unsettled legal and taxation issues raised by the corporates [2]. Subsequently, India decided to converge their standards with IFRS rather than fully adopting the same. The Institute of Chartered Accountants of India (ICAI), the apex body of accountancy in India has developed a new set of standards Ind AS (Indian Accounting Standards) converging with IFRS. These new set of standards are implemented in the country starting from Financial Year 2016-2017 in phase – wise manner subject to listing status and net worth of the companies. The Ministry of Corporate Affairs vide its notification G.S.R 111(E) dated 16 February 2015, requires the Companies with a net worth of Rs. 500 crores or more to comply with Ind AS for preparation of its financial statements for the accounting period beginning after April 1, 2016, with comparatives for the periods ending on 31st March 2016, or thereafter.

However, few Indian Companies which are listed with foreign stock exchanges reported their financial statements as per IFRS in their annual reports along with the financial statements prepared as per Indian Generally Accepted Accounting Principles (IGAAP) to fulfil the regulatory requirements of the overseas exchange. Therefore, financial information for the companies pertaining to the same period of time under different accounting system has been coexisting in India. While there are researches pursued in India to analyse the impact of IFRS on the financial performance of the companies reporting voluntary by calculating and comparing financial ratios under IFRS with that to Indian GAAP. But, no study has been made to assess the effect of IFRS on

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accounting numbers and relevance of financial reporting of Indian companies that have voluntarily reported IFRS statements. Therefore, this research focused on the impact of IFRS on the comparability and relevance of financial information in India. The researchers, in the study examined whether the financial information of selected Indian firms is comparable when these firms apply IGAAP and IFRS for the same period of time. For this, the quantitative impact of IFRS on recognition and valuation on accounting figures and ratios was measured. Further, it was also analysed that which of these standards IFRS or IGAAP made the financial reporting more relevant in influencing the decision making by the investors in the capital market. To this end, the gap between the firm's market value and book value (under the two set of standards) was compared. We expect that our research to be of relevance to the academicians studying the development and progress of international accounting harmonization as the study provides an insight into the consequence of the application of IFRS. The study is also useful to the regulators and policy makers in India i.e. the Ministry of Corporate Affairs, ICAI and other Indian regulatory and supervisory authorities as well as the International accounting regulatory bodies reviewing the financial reporting requirements as it removes a lot of doubts concerning the impact of IFRS or convergence to IFRS on comparability and relevance of financial reporting of the Indian Companies.

2 LITERATURE REVIEW

Perramon and Amat [3] conducted a study on selected 28 companies listed with Spanish index IBEX 35 to examine the impact of the IFRS on the income statements of the non-financial Spanish companies listed with IBEX 35. The empirical test revealed that there was a significant difference in net profit results under PGC and IFRS. Callao, Jarne and Lainez [4] examined the impact of the mandatory adoption of IFRS on the comparability and relevance of financial reporting in Spain. The results of the study revealed that the accounting figures of the balance sheet which were significantly affected were debtors, cash and cash equivalents, equity, long-term and total liabilities. Fixed assets and inventories were not significantly impacted from the adoption of IFRS. The accounting figure of the income statement which varied significantly was operating income. The study concluded cash and cash equivalents, long-term liabilities and total liabilities, cash ratio, indebtedness and return on equity significantly increased under IFRS as compared to the previous Spanish GAAP. On the other hand, it led to a significant decrease in debtors, equity and operating income, solvency ratio and return on assets. The results of the study further revealed that the gap between book value and market value of the firms increase when IFRS are applied. This denoted that the relevance of financial information decreased post IFRS adoption. Similar results were obtained by Gjerde, Knivsfå and Sættem [5] in Norway wherein the value relevance of key accounting figures of the Norwegian companies does not increase post IFRS adoption. Goodwin, Ahmed and Heaney [6], also presented similar kind of results in Australia where the researchers reported an increase in liability and a decrease in equity and earnings under IFRS over the Australian GAAP. Stent, Bradbury and Hooks [7] also reported an increase in liabilities reported under New Zealand IFRS. This was mainly due to increase in Income tax and employee benefit reported under New Zealand IFRS. On the other hand, there was a

decrease in equity reported under New Zealand IFRS over the previous New Zealand GAAP. Similar outcomes were provided by Tsalavoutas, André and Evans [8] in Greece wherein the researchers did not find any significant change in the combined value relevance of equity and income post IFRS adoption. They confirmed that the accounting quality does not improve after the adoption of IFRS. Lantto and Sahlstrom [9] made a study on the Finnish companies and found an increase in debt or debt items and decrease in equity of the companies as a result of adoption of IFRS. But in contrast to the above studies, the adoption of IFRS in Finland resulted in an increase in the income statement items i.e. Net Sales, Operating Profit and Net Profit. Consequently, the Profitability Ratios (OPM, ROE, ROIC) increased under IFRS over Finnish Accounting Standards. Iatridis and Dalla [10] in Greece, reported a positive impact of IFRS on the profitability and leverage of the listed companies in Greece. But on the other hand, the researchers reported that IFRS had a negative impact on the liquidity of most industrial sectors and stock market constituents. In Turkey, Terzi, Oktem and Sen [11] found a significant difference in fixed assets, inventories, shareholder's equity and long-term liability post IFRS adoption. Among the ratios, significant differences were found in current ratio, receivables turnover ratios, fixed assets turnover ratio, asset turnover ratios, total liabilities/tangible assets ratio, equity turnover ratio, short term liabilities/total debt ratio and short term liabilities/total assets ratio calculated as per Turkish local GAAP and IFRS. Ibiamke and Ateboh-Briggs [12] examined the impact of IFRS adoption in Nigeria and found an increase in leverage ratios but liquidity, profitability and market ratios decreased post IFRS adoption. Sovbetov [13] examined the impact of IFRS adoption on the UK companies and found a positive impact of IFRS on profitability ratios and gearing ratio. Whereas, the efficiency and liquidity ratio were unaffected by the adoption of IFRS in the UK. Markelevich, Shaw and Weihs [14] in their study on Israeli companies measured the impact of IFRS adoption on financial statement items, financial ratios, and value relevance of financial reporting of publicly traded Israeli companies. They found a significant increase in almost all the balance sheet and income statement items post IFRS adoption. Yahya, Fagbemi, Oyeniyi, Onile and Sulaiman [15] examined the impact of IFRS adoption on financial statement figures and key financial ratios of Nigeria Banks and found that value assets and liabilities and net profit reported under IFRS were higher than those reported under Nigerian GAAP whereas operating income tend to decrease in IFRS. In India, one of the first studies to assess the impact of IFRS was made by Ray [16]. The researcher compared the financial statements of Wipro Ltd. reported under Indian GAAP with those reported IFRS. It was found that the equity and liability were reclassified under IFRS from the IGAAP. This led to a significant difference in the total liability and equity position under IFRS and IGAAP. The leverage ratio significantly decreased whereas return on equity, return on asset, total asset turnover and net profit ratio was not significantly affected by converging to IFRS. Kamarajugadda and Bhanusireesha [17] analysed the impact of IFRS on financial ratios of 10 Indian companies for a period of six years and found a statistically significant increase in liquidity, profitability, and valuation ratios from the adoption of IFRS. The stability ratios also increased under IFRS, but the increase was not statistically significant. Kalra and Vardia [18] while analyzing the impact of IFRS on activity-

based ratios of six listed companies found that IFRS negatively impacted these ratios although the impact was not significant. Chandrasekar and Kumar [19] also studied the impact of voluntary adoption of IFRS on key financial ratios of four selected listed Indian IT companies. Out of the 12 ratios analysed, 10 ratios were found significantly different. It was found that all the liquidity ratios significantly increased under IFRS whereas all the profitability ratios except return on intangibles, all the leverage ratios except proprietary ratios and all the efficiency ratios significantly decreased under IFRS. Among the financial statement items, current liabilities and shareholder's equity were found to be statistically significant. Whereas the current liabilities decreased, and shareholder's equity increased under IFRS. The other items i.e Revenue, Net Income, Current Assets, and Invested Capital increased under IFRS although the increase was not significant. Das and Saha [20] analysed the impact of voluntary adoption of IFRS on financial indicators and market value of five listed Indian IT companies. They found that the IFRS had a significant impact on the liquidity position of the companies whereas cash flow, asset valuation, net worth, leverage and profitability did not display any significant difference under the two set of standards. This is in contrast to the above study of Chandrasekar and Kumar [19].

3 SAMPLE AND METHODOLOGY

In India, adoption of Ind AS – IFRS converged Indian Accounting standards was expected to begin from 1 April 2016 for listed and unlisted companies having a net worth of Rs. 500 crore or more. However, some companies could elect an early adoption of Ind AS from April 1 2015. And a few Indian companies listed internationally were voluntarily reporting their financial information as per IFRS for the period prior to April, 2016 to fulfil the reporting requirement of overseas stock exchange. The data has been collected for a period of six financial years i.e. from FY 2010-2011 to FY 2015-2016. To pursue the objective of the study, comparable data was required. Therefore, the financial information that is perfectly comparable for each company was used. Accordingly, all 1526 companies listed with NSE were examined to build the population, and only those companies reporting information under both the set of standards i.e. Indian GAAP as well as IFRS, for the same period even for a single year were included. M/s Sify Technologies Limited, an Indian information and communications technology company, which is not listed with NSE but is listed with NASDAQ is included in the sample as it presents information under both IGAAP as well as IFRS. Accordingly, the sample limits to only 12 companies whose information under both the set of standards was available as given in Table 1.

10.	Noida Toll Bridge Company Limited	Infrastructure
11.	Bharti Airtel Limited	Telecommunication
12.	Meghmani Organics Limited	Agri and Agrochemical

As stated above, the data has been collected for a period of six financial years i.e. from FY 2010-2011 to FY 2015-2016. Of the 12 companies constituting the final sample, M/s Sify Technologies Limited and M/s Rolta India Limited have voluntarily transitioned to Ind AS from the 1 April 2015. Therefore, they have not presented their financial statements as per IGAAP (or IFRS) for the financial year 2015-2016. For both of these companies the data has been collected only for 5 years i.e. from FY 2010-2011 to FY 2014-2015. Whereas another two companies, M/s Glenmark Pharmaceuticals Limited and M/s Bharti Airtel Limited had presented their consolidated financial statements as per IGAAP only for the Financial year 2015-2016. Before this year these companies presented their consolidated financial statements only as per IFRS. So, for both of these companies, there is only one full set of financial statements and an opening balance sheet under IGAAP that can be compared to IFRS for the same time period. (The data for these companies for the year 2014-2015 has been extracted from comparatives presented in the annual report of the financial year 2015-2016.). This similar kind of design has also been applied by Blanchette, Racicot, and Girard [21], Punda [22], Kamarajugadda and Bhanusireesha [17], Kalra and Vardia [18].

3.1. Data Collection

The data for the study has been extracted from the annual reports or Form 20F of the companies made available on each company's official website. The data has been hand-collected in the following manner: First, the data for accounting figures reported as per IGAAP and IFRS had been extracted from the annual reports or Form 20F of the companies made available on each company's official website for the same time/period. The data for the accounting figures were extracted from the consolidated financial statements prepared under Indian GAAP and IFRS. The data under Standalone financial statements is not considered in the study as the sample companies do not prepare standalone financial statement as per IFRS. All the figures were taken from the financial statements without any adjustment or modification. But in few variables, such as quick asset, other intangible asset etc. the figures are calculated from the breakup of the heads mentioned in the notes forming an integral part of the consolidated financial statements. From the database of accounting variables created from the abovementioned figures, key financial ratios have been calculated which are categorized into 5 groups: Liquidity Measurement, Debt/Leverage, Operating Performance Ratio, Profitability Indicator Ratios, and Investment Valuation Ratio. In case, where average figures were to be considered, the same was calculated by taking the average of opening balance and closing balance of the respective figures. Gap between companies book value under the two set of standards (IGAAP and IFRS) and market capitalization was measured using the equations:

$$gapi_{IGAAP} = |BV_{IGAAP} - MV_i|$$

$$gapi_{IFRS} = |BV_{IFRS} - MV_i|$$

where,
 BV_{IGAAP} referred to the book value as per IGAAP,

TABLE 1
LIST OF COMPANIES TAKEN AS THE SAMPLE FOR THE STUDY

S.No.	Name of the Company	Industry / Sector of Operations
01.	Infosys Limited	Information Technology
02.	MindTree Limited	Information Technology
03.	Sify Technologies Limited	Information Technology
04.	Tata Consultancy Services Ltd.	Information Technology
05.	Wipro Limited	Information Technology
06.	Rolta India Limited	Information Technology
07.	Tata Motors Limited	Automobile
08.	Dr. Reddy Laboratories Limited	Pharmaceutical
09.	Glenmark Pharmaceuticals Limited	Pharmaceutical

BV_{iIFRS} referred to the Book Value as per IFRS, and MV_i referred to the Market Value of the firms. The subscript i represented the selected companies.

3.2. Variables used in the Research

The variables analysed to pursue the objectives of the study are as follows:

- Balance Sheet (Non-Current Asset, Property, Plant & Equipment, Current Asset, Quick Assets, Inventory, Intangible Asset, Total Asset, Shareholder's Equity, Long-Term Debt/ Borrowings, Non-current Liabilities, Current Liabilities.)
 - Income Statement (Revenue, Operating Income & Net Income)
 - Financial Ratios (Current Ratio, Quick Ratio, Debt Ratio, Long-Term Debt to Equity Ratio, Fixed Asset Turnover Ratio, Return of Total Asset, Return on Equity, Return on Capital Employed, Operating Profit Margin, Net Profit Margin, EPS (Basic)).
- Table 2 and Table 3 presents the definition of the Accounting Figures and Ratios used in the study.
- Gap between companies book value under the two set of standards (IGAAP and IFRS) and market capitalization as defined above.

TABLE 2

DEFINITION OF VARIABLES - ACCOUNTING FIGURES

Figures	Definition
Balance Sheet Items	
Current Assets	Inventories + Trade Receivables + Unbilled Revenue + Cash & Bank Balances + Other Balances with Bank + Short term Loans & Advances + Other Current Asset.
Quick Assets	Current Investment + Trade Receivables + Cash & Cash Equivalent + Derivative Asset.
Inventory	Value of Inventory as reported in the balance sheet.
Non-Current Assets	Property, Plant & Equipment/ Tangible asset + Intangible Assets + Capital Work in Progress+ Goodwill + Deferred Tax Asset (net) + Long term Investment + Long term Loans & Advances + any other Long term Asset.
Property, Plant & Equipment	Tangible Assets less depreciation.
Intangible Asset	Intellectual property rights + Computer Software + right under Service Concession Arrangements + goodwill + any other intangible asset.
Total Assets	Non - current Asset + Current Asset.
Current Liabilities	Short term Borrowings + Trade & Other Payables + Short Term Provisions + Other Current Liabilities (if any).
Non-current Liabilities	Long term Borrowings + Long term Provisions + Deferred tax liabilities + any other long term liability(ies).
Long Term Debt/ Borrowings	Long term Borrowings taken by the company.

Shareholder's Equity	Share Capital+ Securities Premium+ Retained Earnings + any other free reserve + statutory reserve (if any) + Non – Controlling or Minority Interest – Accumulated other comprehensive losses(if any).
Deferred Tax	Deferred tax asset or deferred tax liability reported in the balance sheet.
Income Statement Items	
Revenue	Net Revenue generated from Operations
Operating Profit	Profit / Loss before Exception Items and Tax + Finance Expenses – Finance Income
Net Income / Profit	Profit after Tax reported in the income statement.

TABLE 3

DEFINITION OF VARIABLES - ACCOUNTING RATIOS

Ratios	Description
Liquidity Ratios	
Current Ratio	Current Asset / Current Liability
Quick Ratio	Quick Asset / Current Liability
Leverage Ratios	
Debt Ratio	Total Outside Liabilities or Debt / Total Asset
Long-Term Debt to Equity Ratio	Long Term Debt or Borrowings / Shareholder's Equity
Operating Performance Ratios	
Fixed Asset Turnover Ratio	Revenue / Property, Plant & Equipment.
Profitability Indicator Ratios (in Percentage)	
Return of Total Asset	Operating Income / Average Total Asset
Return on Equity	Net Income / Average Shareholder's Equity
Return on Capital Employed	Net Income / Average Total Long Term Capital Employed
Operating Profit Margin	Operating Profit / Revenue
Net Profit Margin	Net Profit / Revenue
Investment Valuation Ratio	
EPS (Basic)	Profit for the year/ Average no. of equity shares outstanding during the year. (This figure has been taken directly as reported in the income statement.)

Note: Deferred tax asset and deferred tax liability are deducted from total asset and total liabilities, respectively while calculating the ratios.

3.3. Hypothesis

The first objective of the study was to test for the existence of any significant differences between accounting figures and financial ratios under the two set of standards i.e. IGAAP and IFRS. In total, 15 variables and 11 accounting ratios were measured based on Indian GAAP and IFRS. The descriptive statistics for the same are given in Appendix A and B.

The null hypotheses tested for achieving this objective:

H_{01} : There are no significant differences in the values taken by Accounting Figures under IGAAP and IFRS.

H_{02} : There are no significant differences in the values taken by Accounting Ratios under IGAAP and IFRS.

The second objective of the study was to analyse the impact of IFRS on the relevance of financial reporting for decision

making in the capital market. For this purpose, the gap between companies' book value and market capitalization under the two set of standards was measured and examined for existence of any significant difference. The null hypotheses tested for achieving this objective:

H₀₃: There is no significant difference in the gap between Book Value (as per IGAAP and IFRS) and Market Value of the firms.

To achieve this objective, Book Value of the Companies recorded as Total Equity or Shareholders Fund under IGAAP and IFRS was considered. The Market Value of the Company is the figure of market capitalization extracted from the Company's Annual Report. If the figure of market capitalization for a particular year was not stated in the annual report, then the same was calculated by multiplying Company's number of share outstanding for that year by closing market price of the share as per NSE (National Stock Exchange) as on the last day of the respective financial year. The descriptive statistics for the same is given in Appendix C. The gap between the book value and the market value of the companies was measured and analysed to ascertain whether it differed depending upon the calculation of book value as per the IGAAP OR IFRS. To achieve the above-mentioned objectives, a comparison of accounting variables of the selected companies for the same period but reported under two separate set of standards (Related Samples) was made. The Kolmogorov–Smirnov (with Lilliefors significance correction) and Shapiro-Wilk Test were used to determine the normality of the data set (Appendix D, E & F). Subsequently, the paired sample t-test was applied to the variables following the normal distribution and Nonparametric equivalent i.e. the Wilcoxon signed-ranks test was applied to variables that are found to be non-normal.

4 ANALYSIS AND RESULTS

4.1. Differences in financial reporting under IGAAP and IFRS.

As stated above the first objective was to seek significant differences between accounting figures and financial ratios under the three set of standards i.e. IGAAP and IFRS. This was to assess the quantitative impact of IFRS on key accounting figures and ratios. The hypothesis H₀₁ & H₀₂ were tested using parametric or nonparametric test (the paired sample t-test or Wilcoxon Signed rank test, respectively) conditional to the normality or otherwise of the variables. Both the hypotheses were tested at 5 % significance level. The results are presented in Table 4 (for accounting figures) & Table 5 (for ratios).

TABLE 4
RESULTS OF TEST OF HYPOTHESIS H₀₁

Variable	Statistic ^b	p-Value
Balance Sheet Items		
Non-current Assets	-.445	.661
Property, Plant & Equipment	-5.061	.000
Intangible Assets	-3.762	.000
Current Assets	-1.727	.085
Quick Assets	-.976	.333
Total Assets	-1.321	.189

Shareholder's Equity	-3.555	.000
Long-term Debt/ Borrowings	-2.331	.019
Non-Current Liabilities	-3.563	.000
Current Liabilities	-6.574	.000
Deferred Tax Asset	-4.889	.000
Deferred Tax Liability	-1.906	.057
Income Statement Items		
Revenue	-1.697	.090
Operating Income/ Profit	-1.283	.202
Net Income / Profit	-1.479	.140

* Significant at 5%

^a Normal Variable

^b Statistic t (paired sample t-test) for variables that follow a normal distribution and Statistic Z (Wilcoxon Signed rank test) for variables that do not follow a normal distribution.

TABLE 5
RESULTS OF TEST OF HYPOTHESIS H₀₂

Variable	Statistic ^b	p-Value
Current Ratio	-6.174	.000
Quick Ratio	-5.819	.000
Debt Ratio	-4.363	.000
Long-term Debt to Equity Ratio	-.865	.393
Fixed Asset Turnover Ratio	-5.137	.000
Return of Total Asset	-.442	.664
Return on Equity	4.498	.000
Return on Capital Employed ^a	4.260	.000
Operating Profit Margin	-.959	.342
Net Profit Margin	-.959	.342
EPS	-2.083	.037

* Significant at 5%

^a Normal Variable

^b Statistic t (paired sample t-test) for variables that follow a normal distribution and Statistic Z (Wilcoxon Signed rank test) for variables that do not follow a normal distribution.

The first hypothesis was not accepted for eight variables. Precisely, eight balance sheet items displayed significant differences in terms of value reported as per the IGAAP and IFRS. These variables were Property, Plant & Equipment, Intangible Asset, Current Liabilities, Non-Current Liabilities, Long Term Debt/Borrowings, Shareholder's Equity and Deferred Tax Asset. The difference in the value of current assets (p=0.085) and deferred tax liability (p=0.057) reported under the two standards was marginally significant. Whereas, none of the income statement figures considered for the study was significantly different in terms of value reported as per the IGAAP and IFRS. However, the value reported for revenue under the two set of standards was marginally significant (p=0.090). Looking at the number and sum of the positive and negative ranks provided by the Wilcoxon signed rank test, the trend of variations observed under different variables can be discerned. It was found that:

- Current asset, non-current asset, property, plant & equipment, intangible asset, total asset, non-current liabilities, shareholder's equity and both deferred tax asset and liability increased under the IFRS over the IGAAP; and
- Inventory, quick asset, current liabilities, long term debt/borrowings, revenue, operating income and net income declined under the IFRS over the IGAAP.

The second hypothesis was not accepted for 7 variables. The test results revealed that significant differences were observed among the current ratio, quick ratio, debt ratio, fixed asset turnover ratio, return on equity, return on capital employed and earning per share. Again, looking at the number and sum of the positive and negative ranks provided by the Wilcoxon signed rank test, it was found that except the liquidity ratios (current ratio and quick ratio), all other ratios declined under the IFRS over the IGAAP.

4.2. Impact of IFRS on the relevance of financial reporting

The second objective of the study was to analyse the impact of IFRS on the relevance of financial reporting for decision making in the capital market. For this purpose, the gap between companies' book value and market capitalization under the two set of standards was measured and analysed to establish whether this gap differed depending upon the calculation of the book value of the firms as per IGAAP and IFRS. As stated in section III – Sample and Methodology, the following equations were used to determine the absolute value for the gap between Book Value of the firms as per the three standards and Market Value of the firm:

$$\text{gap}_{i\text{IGAAP}} = |BV_{i\text{IGAAP}} - MV_i|$$

$$\text{gap}_{i\text{IFRS}} = |BV_{i\text{IFRS}} - MV_i|$$

where $BV_{i\text{IGAAP}}$ referred to the book value as per IGAAP, $BV_{i\text{IFRS}}$ referred to the Book Value as per IFRS and MV_i referred to the Market Value of the firms. The subscript 'i' represented the selected companies. It was first analysed that the market value of the selected companies was significantly different from the book value when the latter is measured using both the set of standards i.e. Indian GAAP and IFRS. Additionally, from the analysis of the ranks provided by the Wilcoxon signed rank test, it was observed that in the market value is significantly higher than the book value in both the cases. Having established this, Wilcoxon signed rank test was applied to examine the existence of a significant difference between these gaps. The result of the test revealed that there was a significant difference between the gap between Book value as per IFRS and Market Value and gap between Book value as per IGAAP and Market Value.

The results are presented in Table 6.

TABLE 6

RESULTS OF WILCOXON SIGNED RANK TEST FOR COMPARING BOOK VALUE AND MARKET VALUE

Variable	Statistic	p-Value
$BV_{i\text{IGAAP}} \text{ VS } MV$	-5.255	.000
$BV_{i\text{IFRS}} \text{ VS } MV$	-5.374	.000
$\text{gap}_{i\text{IGAAP}} \text{ VS } \text{gap}_{i\text{IFRS}}$	-4.373	.000

* Significant at 5%

Further, the ranks obtained under the Wilcoxon test indicated that the gap between the book value and market value was more when the former was calculated as per the IGAAP. This suggested that the difference between accounting value and market value of the company does decrease when IFRS were

applied indicating a positive effect of IFRS on the value relevance of financial information for the investors for decision making in the capital markets.

5 DISCUSSION

The results of the test and the analysis of the financial statement of the Indian companies reflected an overall increase in assets and equity and a decrease in liabilities and income under the IFRS over the IGAAP. The increase in current asset can be attributed to IAS 1 – Presentation of financial statements – valuation principles, recognition criteria of short – term compensated benefits under IAS 19 – Employee Benefits, IAS 39 – Financial instruments: Recognition and measurement: reclassification of investments into current assets at fair value, increase in trade receivables which can be attributed to fair valuation principles and IFRS 9 – Financial instruments: accounting treatment for debtors in case of bill discounting, difference in recognition of doubtful debts, valuation of current investments. This corresponds to the results of the study of Lantto and Sahlstrom (2009) in Finland, Stent et al. (2010) in New Zealand, Chandrasekhar and Kumar (2017) in India. The results are in contrast to the results of the study of Callao et al. (2007) wherein they reported a significant decrease in current assets in Spain. In case of non-current Assets, Property, Plant and Equipment and the Intangible Asset displayed a significant increase under IFRS from IGAAP. The increase in property, plant and equipment can be attributed to IAS 16 – Property, Plant and Equipment, IAS 17 – Leases, IAS 38 – Intangible asset, IAS 40 – Investment Property: subsequent measurement of investment property. The difference in recognition principles of Asset Realization obligation, lease recognition, accounting treatment of capital advances paid for acquisition for property, plant and equipment, accounting treatment for cost incurred for major inspections, accounting treatment for composite lease led to a difference in the value of asset base reported under the two set of standards. The costs for major inspections are capitalized under the IFRS which are to be expensed under IGAAP. Under IFRS, the land element in composite lease is normally treated as an operating lease (IAS 17 – Leases) and consequently lease rentals and advance are recognized as other assets, whereas under the IGAAP the leasehold land is treated as a fixed asset and amortized over the lease period. The arrangements that may not assume the legal format of a lease agreement but give the right to use an asset against payment or series of payments to be classified as lease under the IFRS. Further, under the IGAAP the capital advances paid for acquisition for property, plant and equipment are treated as long-term loans and advances whereas under the IFRS these are treated as capital work in progress. The increase in intangible asset can be attributed to IAS 38 – Intangible asset where under IFRS, Intangible assets can have indefinite useful life. In the liabilities, significant difference was found in current liability, Long-term Debt and Borrowings, non-current liabilities, shareholder's equity. The difference deferred tax liability under the two set of standards was marginally significant. Whereas, the current liability and the Long-term Debt and Borrowings significantly declined and the non-current liabilities and shareholder's equity significantly increased under IFRS. This is in line with the study of Ray (2012), and Chandrasekar & Kumar (2017) who also reported an increase in equity and decrease in liabilities. Terzi et al. (2013) also found significant deviation shareholder equity and

long term liability post IFRS adoption. On the other hand, the results are in contrast with the results of the study of Goodwin et al. (2008) on Australian firms, Lantto and Sahlstrom (2009) in Finland, Stent et al. (2010) in New Zealand who found an increase in liability and decrease in equity. The decrease in liabilities can be attributed to IFRS 9 – Financial instruments, and IAS 1 – Presentation of financial statements. The increase in equity is due to IFRS 2 – share based payment, IFRS 9 – Financial instruments, IAS 32 – Financial instrument: Presentation and IAS 10 – Events after reporting period. The decrease in long-term liability can be mainly attributed to the reclassification of equity and debt in the balance sheet under IFRS. Under IGAAP the proposed dividend was to be recorded as a provision and disclosed in notes to accounts. Whereas under IFRS, these were to be recognized only when declared. Accordingly, the proposed dividends were derecognized under IFRS and added back to retained earnings thereby increasing the equity and reducing the liability. Under IGAAP, redeemable preference shares were to be treated as equity whereas under IFRS they are to be reclassified as liability and their dividend is to be treated as an interest expense. The increase in deferred tax asset and deferred tax liability can be attributed to IAS 12 – Deferred Tax wherein the deferred taxes are recognized using the income tax approach as against the income statement approach under the Indian GAAP. In case of Income statement items, all the three variables showed a declining trend under IFRS although the difference was not significant. The differences are mainly due to recognition differences in depreciation and amortization, employee cost, deferred tax, finance income and expenses. So it can be inferred that IAS 18 – Revenue Recognition and IFRIC 12 – Service Concession Arrangement specially in infrastructure sector companies did not have a statistical significant impact. The negative impact is mainly due to IAS 39 – Financial Instruments: Recognition and Measurement and increased employee cost due to IAS 19 – Employee benefits, IFRS 2 – Share based payment, IFRS 3 – Business Combination, IAS 2 – Inventories, IAS 16 – Property, Plant and Equipment, IAS 38 – Intangible asset and IAS 40 – Investment Property. The analysis of accounting figures revealed that a significant increase in the shareholder's equity and a significant decrease in liabilities from IGAAP to IFRS was the main underlying reason for the difference in most of the ratios calculated. This corresponds to results obtained by Callao et al. (2007), Ray (2012), Chandrasekar and Kumar (2017) who also attributed this deviation to the reclassification of equity and liabilities under IFRS. However, our results differ from those of by Lantto and Sahlstrom (2009) and Stent et al. (2010) who found an increase in liability and a decrease in equity. In case of Liquidity ratios, an increase in current asset though marginal with a significant decrease in current liability explained the increase in all liquidity ratios under IFRS. Quick assets, though declined under IFRS but the magnitude of decrease was lesser than that of the current liabilities. This resulted in increase in quick Ratio under the IFRS. In case of leverage ratios, the reclassification of equity and long – term liability led to a variation in the leverage ratios. A significant increase in equity coupled with a significant decrease in long-term debt/ borrowing explains the decrease in the Long-term Debt to Equity Ratio. A significant decrease in long-term debt/ borrowing and an increase in total assets though not significant resulted in a decrease in the Debt Ratio.

The decrease in revenue and increase in the property, plant

& Equipment reported under IFRS led to a decrease in Fixed Asset Turnover Ratio under IFRS. The decline in profitability ratios is to be attributed to the decline in income statement items. The decline in operating income and an increase in total asset though not significant led to decrease in Return of total asset. The decline in revenue with corresponding decline in operating income and net income; but greater in magnitude than the decline in operating income and net income led to decline in Operating Profit Margin and Net Profit Margin. A decrease in Net Income in the numerator coupled with a significant increase in shareholder's equity in the denominator led to a decline in Return Ratios - Return on Equity and Return on Capital Employed. Regarding the effect of the IFRS on the gap between accounting value and market value, it was indicative that the book value is further from the market value when IGAAP were applied than when IFRS were applied. This indicates that the relevance of financial reporting for decision making in the capital market increased when IFRS were applied. This is in contrast with the study of Callao et al. (2007).

6. CONCLUSION

The study had two objectives: to analyse the quantitative impact of IFRS on the accounting figures and financial ratios of selected listed Indian companies and to study the effect of IFRS on the relevance of financial reporting of these companies. The result of the study indicated that the image of these companies differs under the two set of standards. Significant differences were found mainly in balance sheet items i.e. inventory, property, plant and equipment, intangible asset, current liability, non-current liability, long-term debt/borrowings, shareholder's equity and deferred tax items. All these items are relevant for the appraisal of the company's financial structure. On the other hand, none of the income statement items displayed any significant differences but they declined under IFRS, though the decline was not significant. In case of the impact of IFRS on the financial performance, the major differences were again caused by the change in equity and liabilities which are balance sheet items. This suggested the fact that IFRS valuation principles mainly impact the balance sheet items and not the income statement items of the Indian Companies, implying that the IFRS are more balance sheet oriented standards. Among the ratios, only the liquidity ratios displayed a significant increase and rest of the ratios – Leverage, operating performance ratio, profitability indicator ratios and Earning Per Share declined under IFRS as compared to Indian GAAP. The findings indicated an increase in liquidity and a decrease in liabilities and leverage. This leads to adding value to the investors, financial health, and managerial efficiency of the companies to external stakeholders. Overall, the result indicates that fair value measurement, presentation of financial statements, events after reporting period, valuation of property, plant and equipment, lease accounting, financial instrument – recognition and measurement, share-based payment were the main reasons for the changes in the accounting items and ratios analysed. The accounting policies and practices are said to be conservative when the market value of the firm exceeds the book value of the firm. As depicted from the results of the study it may be concluded that the relative difference in the market value is not in line with the difference in book values, irrespective of the accounting standards or reporting practices applied by the companies in the

preparation of the financial statements. However, the results of the study revealed that the gap between the market value and book value is wider when measured under the Indian GAAP as compared to IFRS. Accordingly, it can be concluded that IFRS adoption had positively affected the value relevance of financial reporting as the gap between a firm's book and market value narrowed under these standards as compared to Indian GAAP. As stated earlier, instead of adopting IFRS, India decided to converge its standards with IFRS and has notified a new set of standards – IFRS converged Ind AS. But these standards are not applicable on all the Indian Companies. The implementation of the new standards is based upon the listing status and net worth of a company. In India, the threshold criteria for application of Ind AS is for corporates having a net worth of Rs. 250 crores or more or they are listed entities. So, at present two parallel sets of accounting standards are prevailing i.e. the existing Accounting Standards i.e. AS and new IFRS converged accounting standards i.e. Ind AS. The research contributes to the growing literature on the impact of adopting IFRS or converging to IFRS. It contributes to the accounting literature by demonstrating that positive impact of IFRS and Ind AS on the value relevance of financial reporting. The results of the study are imperative to the policy makers of the country who have deferred the implementation of Ind AS for banking sector and NBFCs and exempted small private entities from application of Ind AS. Whereas, in global scenario there are two set of IFRS – one is IFRS for corporates and another is IFRS for SMEs (Small and Medium Enterprises). In India, when we move to IFRS converged Ind AS, we only have one set of Ind AS i.e. for corporates and not an Ind AS for SMEs. But at the end of the day the regulators should move to IFRS i.e. IFRS converged Ind AS for all the companies, as the country should not have two sets of Generally Accepted Accounting Principles, running parallelly. So, in line with IFRS for SME, India should also move towards bring about the Ind AS for SME platform. The results of the study would be of interest to the institutions and regulatory bodies involved in making changes necessary to harmonize Indian and International accounting standards and help them to bring about reforms in local standards in order to ensure convergence between them and IFRS for all companies. This will eliminate the existence of multiple set of standards in the country for different class of companies. The study had some limitations. First, very few companies are reporting under IFRS and due to this the sample size became a limiting factor. Further, the sample consisted mainly the IT sector companies, therefore, a generalization of this study to other sectors would not be possible. Also, since IT companies did not have much inventory, inventory valuation under the three standards was not analysed which is an important variable. In spite of this fact, a similar kind of study would be worth repeating for all listed companies which have implemented Ind AS or which are in process of implementing the Ind AS. Since, India will not adopt IFRS but has converged to Ind AS from 2016-2017, further studies with extended sample size can be carried out to measure the impact of Ind AS on the financial performance of the companies. Future studies pertaining to the impact of Ind AS on the financial reporting based on some corporate characteristics of the firms, such as firm size, the sector of operations, etc. can be made. Studies on the association between adoption of Ind AS and reduction in multiple reporting and cost of preparation of financial reporting can be conducted

to assess whether convergence to IFRS leads to avoidance of multiple reporting and reduction in the cost of preparation of financial statements. Also, this study does not allow quantification of the direct effect of each standard on the accounting figures and financial ratios. This limitation would, however, be difficult to overcome, because the information furnished by firms is not sufficiently detailed and is too patchy for this purpose, as explained above.

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APPENDICES

APPENDIX A. DESCRIPTIVE STATISTICS FOR ACCOUNTING FIGURES

Variable Under I-GAAP	Minimum	Maximum	Mean	Median	Std. deviation
Non-current Assets	3757.00	1891373.00	224066.29	54432.65	431668.22
Property, Plant & Equipment	51.86	732172.00	86794.61	38424.65	166940.35
Intangible Asset	26.29	887780.00	63493.44	9230.63	150404.96
Current Assets	154.08	1153151.30	207952.40	64550.27	275211.67
Quick Assets	83.12	650828.80	143695.53	38562.45	177485.53
Total Assets	6273.51	2692976.00	432018.66	105847.84	651516.61
Shareholder's Equity	4443.37	816709.30	188969.43	45104.50	222207.14
Long Term Debt/ Borrowings	0.00	897745.00	67908.85	2655.06	176588.49
Non-Current Liabilities	71.00	1007711.00	89610.08	6428.61	224836.22
Current Liabilities	574.16	1108204.60	153439.13	43999.50	269348.39
Deferred Tax Asset	0.00	45393.30	4354.63	1123.00	9374.11
Deferred Tax Liability	0.00	46028.00	3727.57	512.95	8800.25
Revenue	858.48	2755611.10	407118.24	86872.49	645033.35
Operating Income/ Profit	-6523.00	286418.00	61393.34	14390.48	79659.05
Net Income / Profit	-8392.30	242918.00	47948.12	11499.00	60654.36
Variable Under IFRS	Minimum	Maximum	Mean	Median	Std. deviation
Non-current Assets	3742.00	2019933.00	224328.78	55895.09	436130.78
Property, Plant & Equipment	50.25	670065.00	92199.77	42228.59	164658.16
Intangible Asset	14.27	1162450.00	90461.30	13121.82	218234.25
Current Assets	154.08	1099440.40	212044.48	64524.13	279514.43
Quick Assets	83.12	627761.20	141767.26	38497.84	173606.69
Total Assets	5120.29	2619981.30	436373.26	115251.68	655180.77
Shareholder's Equity	3769.78	768036.70	204140.79	51717.00	240129.12
Long Term Debt/ Borrowings	0.00	544862.50	59465.97	2655.06	143662.63
Non-Current Liabilities	54.52	958066.00	90129.77	9010.43	221083.29
Current Liabilities	442.07	1067689.30	142102.70	40516.31	263446.08
Deferred Tax Asset	0.00	59502.00	8865.72	2281.00	14576.49
Deferred Tax Liability	-129830.00	43441.40	1819.85	703.50	18845.25
Revenue	858.48	2675103.20	402290.26	75656.52	637039.45
Operating Income/	-6884.74	320693.00	61610.08	15440.50	77822.64

Profit					
Net Income / Profit	-8674.17	245863.00	46950.94	12651.00	59682.44

APPENDIX B. DESCRIPTIVE STATISTICS FOR RATIOS

Variable Under I-GAAP	Minimum	Maximum	Mean	Median	Std. deviation
Current Ratio	0.22	4.59	1.79	1.52	1.03
Quick Ratio	0.12	4.11	1.34	0.94	0.95
Debt Ratio	0.12	0.79	0.44	0.43	0.20
Long Term Debt – Equity Ratio	0.00	2.09	0.38	0.11	0.53
Fixed Asset Turnover Ratio	0.52	23.78	6.45	5.78	4.99
Return of Total Asset	-12.32	40.12	14.29	12.93	9.84
Return on Equity	-42.41	51.34	19.82	22.83	14.96
Return on Capital Employed	-18.28	42.82	16.96	16.86	12.88
Operating Profit Margin	-29.94	71.30	19.49	17.25	17.78
Net Profit Margin	-38.52	64.67	15.02	13.52	15.71
EPS	-52.02	186.49	44.76	31.04	49.73
Variable Under IFRS	Minimum	Maximum	Mean	Median	Std. deviation
Current Ratio	0.33	6.51	2.13	1.60	1.45
Quick Ratio	0.18	5.91	1.62	1.05	1.31
Debt Ratio	0.11	0.98	0.43	0.41	0.22
Long Term Debt – Equity Ratio	0.00	2.36	0.35	0.08	0.51
Fixed Asset Turnover Ratio	0.53	24.54	5.78	5.51	4.95
Return of Total Asset	-13.15	40.24	14.65	12.33	10.69
Return on Equity	-50.45	42.92	17.95	21.61	14.66
Return on Capital Employed	-20.10	38.92	15.68	16.43	12.32
Operating Profit Margin	-31.60	68.06	19.35	17.83	16.82
Net Profit Margin	-39.81	80.88	14.29	14.61	15.30
EPS	-53.76	186.35	43.87	27.39	49.69

APPENDIX C. DESCRIPTIVE STATISTICS FOR MARKET VARIABLES

Variable	Minimum	Maximum	Mean	Median	Std. deviation
BVigaap- MV	409.04	4484864.80	694705.57	236709.91	1037755.27
BVifrs- MV	165.56	4418455.25	679213.19	229167.41	1020846.58

APPENDIX D. NORMALITY TEST FOR ACCOUNTING FIGURES

Variable Under I-GAAP	Kolmogorov-Smirnov ^a		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Non-current Assets	.335	.000	.547	.000
Property, Plant & Equipment	.353	.000	.531	.000
Intangible Asset	.351	.000	.464	.000
Current Assets	.225	.000	.767	.000
Quick Assets	.232	.000	.798	.000
Total Assets	.257	.000	.687	.000
Shareholder's Equity	.250	.000	.804	.000
Long Term Debt/ Borrowings	.429	.000	.440	.000
Non-Current Liabilities	.450	.000	.444	.000
Current Liabilities	.285	.000	.604	.000
Deferred Tax Asset	.321	.000	.493	.000
Deferred Tax Liability	.390	.000	.475	.000
Revenue	.264	.000	.668	.000
Operating Income/ Profit	.262	.000	.783	.000
Net Income / Profit	.238	.000	.800	.000
Variable Under IFRS	Kolmogorov-Smirnov ^a		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Non-current Assets	.320	.000	.544	.000
Property, Plant & Equipment	.324	.000	.564	.000
Intangible Asset	.381	.000	.460	.000
Current Assets	.224	.000	.765	.000
Quick Assets	.234	.000	.801	.000
Total Assets	.255	.000	.687	.000
Shareholder's Equity	.245	.000	.800	.000
Long Term Debt/ Borrowings	.424	.000	.458	.000
Non-Current Liabilities	.448	.000	.450	.000
Current Liabilities	.322	.000	.572	.000
Deferred Tax Asset	.305	.000	.656	.000
Deferred Tax Liability	.427	.000	.375	.000
Revenue	.264	.000	.668	.000
Operating Income/ Profit	.240	.000	.799	.000
Net Income / Profit	.242	.000	.800	.000

APPENDIX E. NORMALITY TEST FOR RATIOS

Variable Under IGAAP	Kolmogorov-Smirnov ^a		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Current Ratio	.118	.032	.938	.004
Quick Ratio	.204	.000	.884	.000
Debt Ratio	.145	.002	.927	.001
Long Term Debt – Equity Ratio	.243	.000	.748	.000
Fixed Asset Turnover Ratio	.118	.033	.871	.000
Return of Total Asset	.125	.018	.968	.110
Return on Equity	.108	.068	.928	.001
Return on Capital Employed	.098	.200*	.978	.312*
Operating Profit Margin	.201	.000	.826	.000
Net Profit Margin	.169	.000	.882	.000
EPS	.163	.000	.895	.000
Variable Under IFRS	Kolmogorov-Smirnov ^a		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Current Ratio	.157	.001	.880	.000
Quick Ratio	.202	.000	.838	.000
Debt Ratio	.116	.038	.937	.003
Long Term Debt – Equity Ratio	.249	.000	.716	.000
Fixed Asset Turnover Ratio	.167	.000	.806	.000
Return of Total Asset	.121	.024	.953	.019
Return on Equity	.117	.035	.880	.000
Return on Capital Employed	.087	.200*	.977	.289*
Operating Profit Margin	.161	.000	.876	.000
Net Profit Margin	.149	.002	.872	.000
EPS	.173	.000	.896	.000

* Variables found to be Normal

APPENDIX F. NORMALITY TEST FOR MARKET VARIABLES

Variable	Kolmogorov-Smirnov ^a		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
MV	.233	.000	.751	.000
BV_IGAAP	.250	.000	.804	.000
BV_IFRS	.246	.000	.800	.000
BVigaap- MV	.252	.000	.707	.000
BVifrs- MV	.253	.000	.704	.000