EFFECT OF IFRS AND IND AS ON THE FINANCIAL STATEMENTS OF LISTED INDIAN COMPANIES: A COMPARATIVE ASSESSMENT

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Abstract   The Ministry of Corporate Affairs of India, vide its notification G.S.R 111(E) dated 16 February 2015, requires compliance of IFRS converged Ind AS in preparation of financial statements and audit by Indian listed companies for the accounting periods beginning on or after 1 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 1 April 2016. This paper examined the effect of IFRS and IFRS converged Ind AS on the financial reporting of selected listed Indian companies for which financial reporting under the three set of standards for the same period was available. It was also analysed whether value relevance of financial information provided under IFRS and Ind AS was higher than that provided in financial statements prepared as per previous IGAAP, for the investors when they have to make decisions in the capital markets. The result of the research revealed a significant quantitative impact of IFRS and Ind AS on some of the selected accounting figures and ratios. It was also observed that IFRS and Ind AS had a positive effect on the relevance of financial reporting.

Keywords: Effect, International Financial Reporting Standards (IFRS), IFRS Converged Ind AS, Indian GAAP, Financial Reporting, India

INTRODUCTION

Globalisation, coupled with the internationalisation of financial markets, has contributed to the factor that the companies are now able to procure funds from overseas or foreign investors. Consequently, this also requires companies to prepare their financial statements as per global standards to address foreign investors. As a result of this, the companies have to prepare a dual set of financial statements: one set of financial statements are prepared as per the national standards to fulfil the regulatory requirements of the home country and another set is prepared as per the global standards to meet the regulatory requirements of overseas financial markets.

To circumvent these multiple reporting requirements, accountancy bodies around the globe were trying to harmonise various national accounting systems and develop a single set of standards for financial reporting recognised worldwide. The solution came out to be International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). IFRS is now recognized as the global language of financial reporting which is fair and transparent to both national as well as foreign stakeholders. These standards have made the financial information provided by the companies easily understandable and comparable across international boundaries.

Therefore, more and more countries are either adopting IFRS or converging their standards with IFRS in terms of both accounting rules as well as governance (Shrivastava & Bedia, 2017). Similarly, India also originally decided to adopt IFRS for the period commencing on or after 1 April 2011, but the deadline was deferred on account of unresolved legal and taxation issues brought up by the corporates (Bedia & Shrivastava, 2016). Subsequently, India decided to converge their standards with IFRS rather than fully adopting the same.

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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. Although Ind AS are the same as IFRS, there are certain differences between the two set of standards which are known as 'carve-outs.' The carve-outs are nothing but the differences between the IFRS and Ind AS, which bring out a major change in accounting treatment. 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 shall comply with Ind AS for financial statements for the accounting period beginning after 1 April 2016, with comparatives for the periods ending on 31 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 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. The earlier conceptual research on IGAAP, IFRS and Ind AS has shown that differences exist between these accounting systems. While there are studies in India to analyse the impact of IFRS on the financial performance of the companies reporting voluntary, there is no study done to find a significant difference between the financial performance of the companies under the three standards for the same period. Therefore, this research focuses on the effects of IFRS and Ind AS on the comparability and relevance of financial information in India.

We seek to establish whether the financial information of selected Indian firms is comparable when these firms apply IGAAP, IFRS and Ind AS for the same period of time. For this, the quantitative impact of IFRS and Ind AS on recognition and valuation on Accounting Figures and Ratios is measured. Further, it is also analysed that which of these standards IFRS or Ind AS 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 three set of standards) are compared.

We expect that our research is to be of relevance to academics studying the development and progress of international accounting harmonisation, to the Ministry of Corporate Affairs, ICAI, International accounting regulatory bodies and other Indian regulatory and supervisory authorities as the study provides an insight into the consequence of the application of IFRS and Ind AS.

LITERATURE REVIEW

The European Union (EU) countries were among the early adopters of IFRS; therefore, much of literature is available from studies conducted in EU countries.

Callao et al. (2007) studied the consequence of the mandatory adoption of IFRS on the comparability and relevance of financial reporting in Spain and found a significant increase in cash and cash equivalents, long-term liabilities and total liabilities, cash ratio, indebtedness and return on equity, whereas a significant decrease was observed 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 increases when IFRS is applied. This indicated that there was no improvement in the relevance of financial information post-IFRS application. Comparable results were found by Gjerde et al. (2008) on a study on Norwegian companies wherein it was found that value relevance of key accounting figures does not increase post-IFRS adoption. The same outcome was given by Tsalavoutas et al. (2012) in Greece where they found that there is no significant change in the combined value relevance of equity and income in the post-IFRS adoption confirming that the accounting quality does not improve after the adoption of IFRS.

In contrast to these results, Khanagha et al. (2011) found that adoption of IFRS had improved the relevancy of accounting information in Saudi Arabia and Bahrain. Similarly, Gulhan (2012) made an empirical study on 193 Turkish listed Companies and found that IFRS has positively changed the relevance of earnings and book value and increased the value relevance of accounting information.

In another study by Lantto and Sahlstrom (2009) on Finnish companies, it was found that debt or debt items increased whereas the equity decreased under IFRS. But on the other hand, the study revealed an increase in the income statement items, i.e. Net Sales, Operating Profit and Net Profit and consequently, an increase in Profitability Ratios (OPM, ROE, ROIC) under IFRS over Finnish Accounting Standards. This study is in tune with the study of Stent et al. (2010), which reported an increase in liabilities mainly due to increase in income tax and employee benefit reported under NZ IFRS and a decrease in equity reported under NZ IFRS over the previous NZ GAAP.

Iatridis and Dalla (2011) studied the impact of IFRS adoption on financial reporting of listed companies in Greece and found that transition to IFRS had a positive impact on profitability and leverage and negative impact on the liquidity of most

industrial sectors and stock market constituents. Ibiamke and Ateboh-Briggs (2014) in their examination of the impact of IFRS adoption in Nigeria also found an increase in leverage ratios but liquidity, profitability and market ratios decreased post-IFRS adoption. Sovbetov (2015) also found a positive impact of IFRS on profitability ratios and gearing ratio in his study of UK companies but the efficiency and liquidity ratio were unaffected by the adoption of IFRS in the United Kingdom.

Terzi et al. (2013) in their study assessed the impact of IFRS adoption on listed manufacturing companies in Turkey and found a significant difference in fixed assets, inventories, shareholder's equity and long-term liability. Among the ratios, a significant impact was observed on liquidity and turnover ratios. Markelevich et al. (2016) 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.

In India, Ray (2012) studied the impact of IFRS on financial statements of Wipro Ltd. and found that a deviation was found in the total liability and equity position, which is mainly because of reclassification between equity and total liability. Leverage ratio significantly decreased whereas the return on equity, return on asset, total asset turnover and net profit ratio were not significantly affected by converging to IFRS.

Kamath and Desai (2014) studied the impact of IFRS adoption on financial activities of eight selected listed Indian companies that have voluntarily reported their financial statements as per IFRS and found that the operating and investment activities improved whereas debt covenants and financial risk did not exhibit any enhancement from the adoption of IFRS.

Achalapathi and Bhanusireesha (2015) analysed the impact of IFRS on financial ratios of 10 Indian companies for 6 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 (2016) while analysing 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. In contrast to these studies, Gupta et al. (2017) in their analysis on impact of IFRS on key financial ratios of Wipro Ltd. for a period of 5 years found a significant difference in debt to total asset ratio, return on equity, return on capital employed and net profit ratio, whereas current ratio and debt-equity ratio were not significantly different under the two set of standards.

Chandrasekar and Kumar (2017) 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 decreased under IFRS. Among the financial statement items, current liabilities and shareholders' 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.

SAMPLE AND METHODOLOGY

As per the requirements of the study, the sample consisted of the companies whose financial information under the three standards, i.e. IGAAP, IFRS and Ind AS for the same time was available.

First Ind AS reporting period was 31 March 2017. Ind AS 101 requires the first set of Ind AS-based financial statements to include comparative figures based on Ind AS for the period ending on 31 March 2016. Further, it also requires the entity to restate its opening balance sheet as on 1 April 2015. Accordingly, the financial statements of 2017 include comparative figures of 2016 and restated balance sheet figures of 1 April 2015. So, the study was constructed on 2016 balance sheet and income statement as well as the 2015 balance sheet statement were prepared under Ind AS and previous IGAAP. Further, to fulfil the requirement of the study, only those entities were selected whose financial information as per IFRS for these 2 years was also readily available.

So, the sample limits to only 10 companies whose information under all three standards was available as given in Table 1.

Table 1: List of Companies Taken as the Sample for the Study

Sr. No.	Name of the Company	Industry / Sector of Operations
1.	Infosys Limited	Information Technology
2.	MindTree Limited	Information Technology
3.	Tata Consultancy Services Ltd.	Information Technology
4.	Wipro Limited	Information Technology
5.	Tata Motors Limited	Automobile
6.	Dr. Reddy Laboratories Limited	Pharmaceutical

Sr. No.	Name of the Company	Industry / Sector of Operations
7.	Glenmark Pharmaceuticals Limited	Pharmaceutical
8.	Noida Toll Bridge Company Limited	Infrastructure
9.	Bharti Airtel Limited	Telecommunication
10.	Meghmani Organics Limited	Agri and Agrochemical

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:

- The Balance Sheet and Income Statement figures as per Ind AS for the year 2016 and balance sheet figures for the year 2015 have been taken from comparatives restated and reconciled in 2017 annual report (i.e. first Ind AS based financial figures).

- The Balance Sheet and Income Statement figures as per IGAAP and IFRS have been extracted from the annual report for the year 2016 and 2015. And in certain companies, the figures as per IFRS are not stated in Companies Annual Report; so, they are extracted from Form 20F submitted to the United States Securities and Exchange Commission and published on companies' website.

- From the database of accounting variables created from the abovementioned figures, key financial ratios have been calculated which are categorized into five 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.

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, Total Asset, Shareholder's Equity, Long-Term Debt/Borrowings, Non-current Liabilities and Current Liabilities).
- Income Statement (Revenue, Operating Income, Net Income and EPS).
- 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 and EPS (Basic)).

Tables 2 and 3 present the definition of the Accounting Figures and Ratios used in the study.

Table 2: Definition of Variables - Accounting Figures

Figures	Definition
Balance Sheet Items	
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.
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
Total Assets	Non- current Asset + Current Asset
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).
Long Term Debt / Borrowings	Long-term Borrowings taken by the company.
Non-current Liabilities	Long-term Borrowings + Long-term Provisions + Deferred tax liabilities + any other long-term liability(ies).
Current Liabilities	Short-term Borrowings + Trade & Other Payables + Short-term Provisions + Other Current Liabilities (if any)
Total Outside Liabilities	Current liability + Non-current Liability
Income Statement Items	
Revenue	Net Revenue generated from Operations
Operating Income / Profit	Profit / Loss before Exception Items and Tax + Finance Expenses – Finance Income
Net Income / Profit	Profit after Tax

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.

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

Hypothesis and Data Analysis

The first objective of the study was to test for the existence of any significant differences between accounting figures and financial ratios under the three set of standards, i.e. IGAAP, IFRS and Ind AS (IFRS converged Indian Accounting Standards). The null hypotheses tested for achieving this objective are as follows:

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

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

The second objective of the study was to analyse the impact of IFRS and Ind AS 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 three set of standards was measured.

To achieve this objective, Book Value of the companies recorded as Total Equity or Shareholders Fund under IGAAP,

IFRS and Ind AS 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 null hypothesis tested for achieving this objective is as follows:

$H_{03:}$ *There are no significant differences in the Book Value (recorded as per IGAAP, IFRS and Ind AS) and the market values of the selected Indian companies.*

To this end, we made a comparison of accounting figures and ratios of the selected companies for the same period but reported under three separate set of standards (Related Samples). *Shapiro-Wilk Test* and *Anderson-Darling Test* were used to determine the normality of the data set (*Appendix D, E & F*). Subsequently, *one-way repeated measures ANOVA* was applied to the variables following the normal distribution and Nonparametric equivalent i.e. *Friedman Test* was applied to variables that are found to be non-normal.

ANALYSIS AND RESULTS

Differences in financial reporting under IGAAP, IFRS and Ind AS.

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, IFRS and Ind AS.

To test for the existence of differences between values taken by accounting figures and financial ratios, the null hypotheses tested were as follows:

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

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

Since, only balance sheet as per Ind AS was reinstated for the year 2015, the income statement figures and ratios calculated using accounting figures pertaining to income statement were available only for one year.

Accordingly, 10 balance sheet items for 2 years and three income statement figures for one year measured under the three set of standards IGAAP, IFRS and Ind AS were compared. Descriptive Statistics for the variables are given in *Appendix A*.

In the same way, four set of ratios (i.e. Current Ratio, Quick Ratio, Debt Ratio and Long-term Debt to Equity Ratio were calculated using balance sheet figures are measured for 2 years (i.e. 2014-2015 and 2015-2016) and nine ratios (i.e. Fixed Asset Turnover Ratio, Return of Total Asset, Return on Equity, Return on Capital Employed, Operating Profit Margin, Net Profit Margin and EPS (Basic)), calculated by using income statement figures, were measured for 1 year (2015-2016). Descriptive Statistics for the ratios are given in *Appendix B*.

The hypothesis H_{01} & H_{02} were tested using a parametric or nonparametric test (*one-way repeated measures ANOVA* or *Friedman 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 Tables 4 (for accounting figures) and 5 (for ratios).

Table 4: Results of Test of Hypothesis H_{01}

Variable	Statistic[b]	p-Value
Balance Sheet Items		
Non-current Assets	3.600	0.165
Property, Plant & Equipment	22.623	< 0.0001*
Current Assets	1.256	0.534
Quick Assets	0.935	0.627
Total Assets	1.600	0.449
Shareholder's Equity	5.700	0.058
Long-term Debt / Borrowings	8.522	0.014*
Non-Current Liabilities	1.241	0.538
Current Liabilities	29.026	< 0.0001*
Total Outside Liabilities	18.709	< 0.0001*
Income Statement Items		
Revenue	1.188	0.552
Operating Income / Profit [a]	0.157	0.856
Net Income / Profit	5.400	0.067

* Significant at 5%

[a] Normal Variable

[b] *Statistic F (One-way repeated measures ANOVA)* for variables that follow a normal distribution and *Statistic Q (Friedman Test)* for variables that do not follow a normal distribution.

Table 5: Results of Test of Hypothesis H_{02}

Variable	Statistic[b]	p-Value
Current Ratio[a]	11.992	< 0.0001*
Quick Ratio	12.900	0.002*
Debt Ratio	6.300	0.043*
Long-term Debt to Equity Ratio	7.529	0.023*
Fixed Asset Turnover Ratio [a]	9.256	0.001*

Variable	Statistic[b]	p-Value
Return of Total Asset	0.600	0.741
Return on Equity[a]	7.638	0.002*
Return on Capital Employed[a]	5.368	0.011*
Operating Profit Margin	0.154	0.926
Net Profit Margin	3.800	0.150
EPS	2.600	0.273

* Significant at 5%

[a] Normal Variable

[b] *Statistic F (One-way repeated measures ANOVA)* for variables that follow a normal distribution and *Statistic Q (Friedman Test)* for variables that do not follow a normal distribution.

The first hypothesis was not accepted for four variables. Precisely, four balance sheet items displayed significant differences in terms of value reported as per the IGAAP, IFRS and Ind AS. These variables were Property, Plant & Equipment, Long-Term Debt / Borrowings, Current Liabilities & Total Outside Liabilities. The difference in the value of Shareholder's Equity reported under the three standards was marginally significant (p = 0.058). Whereas, none of the income statement figures considered for the study was significantly different applying any of the three standards. However, the value reported for Net Profit under the three set of standards was marginally significant (p = 0.067).

The second hypothesis was not accepted for seven variables. The test results revealed that significant differences are observed among all the Liquidity Ratios, Leverage Ratios & Operating Performance Ratios selected for the study. Among the profitability Indicator Ratios, Return on Equity and Return on Capital Employed displayed significant differences. The other profitability ratios and Investment Valuation Ratio (EPS) were not affected by the change in accounting standards.

Since the abovementioned variables were both normal and otherwise, post hoc comparisons were performed using t-Test with Bonferroni correction or Nemenyi's procedure depending upon the normality or otherwise of the variables. Focusing on the variables generating significant differences among the three standards and based on the results provided by the *One Way repeated measures Anova / Friedman Test* and the respective post-hoc tests, we may conclude that financial statements of the selected firms revealed that among the three standards:

- The value of Property, Plant and Equipment reported was highest under IFRS and lowest under Ind AS.
- Value of Current Liability, Long-Term Debt / Borrowings and Total Outside Liability reported was highest under IGAAP and lowest under Ind AS.

- Among the Liquidity Ratios, Current Ratio calculated was highest under IFRS and lowest under IGAAP. On the other hand, Quick Ratio calculated was highest under Ind AS and lowest under IGAAP.
- Among the Leverage Ratios, Debt Ratio as well as Long-Term Debt-Equity Ratio calculated was highest under IGAAP and lowest under IFRS.
- Fixed Asset Turnover Ratio calculated was highest under Ind AS and lowest under IFRS.
- Among the Profitability Indicator Ratios, Return on Equity and Return on Capital Employed was highest under IGAAP and lowest under IFRS.

The second objective of the study was to analyse the impact of IFRS and Ind AS 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 three set of standards was measured and analysed to establish whether this gap differs depending upon the calculation of the book value of the firms as per IGAAP, IFRS and Ind AS. 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:

1. $\text{gap}_{i\text{IGAAP}} = |\,BV_{i\text{IGAAP}} - MV_i\,|$
2. $\text{gap}_{i\text{IFRS}} = |\,BV_{i\text{IFRS}} - MV_i\,|$
3. $\text{gap}_{i\text{Ind AS}} = |\,BV_{i\text{Ind AS}} - MV_i\,|$

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 $BV_{i\,\text{Ind AS}}$ referred to the Book Value as per Ind AS, MV_i referred to the Market Value of the firms. The subscript i represented the selected companies.

The null hypothesis tested for achieving this objective is as follows:

$H_{03:}$ There are no significant differences in the gap between Book Value (recorded as per IGAAP, IFRS and Ind AS) and the market values of the selected Indian companies.

The Descriptive Statistics for the variables used in this hypothesis are given in *Appendix C*.

Having confirmed that the book value of the companies reported as per all the three standards significantly differed from the market value of the companies, H_{03} is tested by applying *Friedman Test* given that the variables did not follow a normal distribution.

The results are presented in Table 6.

Table 6: Results of Friedman Test for Hypothesis H_{03}

Variable	Statistic	p-Value
$\text{gap}_{\text{IGAAP}}$ *vs* gap_{IFRS} *vs* $\text{gap}_{\text{Ind AS}}$	15.100	0.000*

* Significant at 5%

The Friedman Test, which evaluated the difference between medians of $\text{gap}_{\text{IGAAP}}$ (*Mdn* = 470639.15), gap_{IFRS} (*Mdn* = 488589.95) and $\text{gap}_{\text{Ind AS}}$ (*Mdn* = 477166.05), was statistically significant. Post-hoc analysis revealed that value of gap between book value as per IGAAP and market value was significantly different (p = 0.000) and (p = 0.008) from value of gap between book value as per IFRS and market value and value of gap between book value as per Ind AS and market value, respectively. There was no statistically significant difference between the value of the gap between book value as per IFRS and market value and value of the gap between book value as per Ind AS and market value (p = 0.802).

Further, the sum of ranks in the post-hoc test revealed that among the three standards, the gap between book value and market value was highest when IGAAP were applied, and it was lowest when IFRS were used.

DISCUSSION

The analysis of the financial items under the three standards revealed that a marginal increase in shareholder's equity and a significant decrease in liabilities from IGAAP to IFRS and Ind AS 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's (2009) and Stent et al.'s (2010) who found an increase in liability and a decrease in equity.

The decrease in liabilities can be attributed to IFRS 9-Financial instruments and its corresponding Ind AS 109 - Financial Instrument, and IAS 1 – Presentation of financial statements & its corresponding Ind AS.

The increase in equity is due to IFRS 2-share based payment and its corresponding Ind AS 102, and IFRS 9-Financial instruments and its corresponding Ind AS 109, IAS 32-Financial instrument: Presentation & its corresponding Ind AS 32, IAS 10 – Events after reporting period & its corresponding Ind AS 10.

The decrease in long-term liability can be mainly attributed to the reclassification of equity and debt in the balance sheet under IFRS and Ind AS. Under IGAAP, the proposed dividend was to be recorded as a provision and disclosed in notes to accounts. Whereas under IFRS and Ind AS, these were to be recognised only when declared. Accordingly, the proposed dividends were derecognised under IFRS & Ind AS 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 and Ind AS they are to be reclassified as a liability and their dividend is to be treated as an interest expense.

In case of non-current Assets, only Property, Plant and Equipment displayed a significant increase under IFRS from IGAAP, whereas it declined under Ind AS from IGAAP. Under IFRS, the land element in the composite lease is normally treated as an operating lease (IAS 17-Leases) and consequently lease rentals and advances are recognised as other assets, whereas under GAAP the leasehold land is treated as a fixed asset and amortised over the lease period. While Ind AS is similar to IFRS, it does not permit property interest in operating lease to be accounted for as an investment as Ind AS 40 prohibits fair value model. Also, the difference between the lease rentals reported under IAS 17 and Ind AS 17 is due to the carve-out in Ind AS 17. Further, under GAAP, the capital advances paid for acquisition for property, plant and equipment are treated as long-term loans and advances; whereas under IFRS and Ind AS, these are treated as capital work in progress.

In the case of current assets, quick asset and other non-current assets reported under IFRS and Ind AS were higher than that reported under IGAAP although the difference was not significant. The increase in current assets is attributed to differences in valuation principles of investments (IAS 40 & Ind AS40), lease (IAS 17 & Ind AS 17-Leases), provision for doubtful debts and employee benefits – short-term compensated absences (IAS-19 & Ind AS19 – Employee Benefits). Whereas the increase in non-current asset under IFRS and Ind AS is due to differences in valuation of property, plant and equipment (IAS 16 & Ind AS 16 - Property, Plant and Equipment), valuation of goodwill, intangible assets and investments (IAS 38 and Ind AS 38 – Intangible Asset).

This increase in current assets, coupled with a decrease in current liability, led to an increase in all liquidity ratios under IFRS and Ind AS over IGAAP. An increase in shareholder equity and a decrease in total outside liabilities resulted in lower debt ratio and debt-equity ratio. Further, the decrease in return on equity could also be attributed to the increase in equity reported under IFRS & Ind AS.

The revenue reported under the three standards was almost the same, and therefore we can infer that IAS 18-Revenue Recognition and its corresponding Ind AS 18 did not have a statistical impact. However, the net income reported a marginally significant increase under IFRS and Ind AS. The operating income and operating profit margin were highest under IFRS. The net profit reported and the net profit margin under Ind AS were highest among the three standards. The profitability ratios under Ind AS also increased as compared to that under GAAP. This corresponds to the study of Lantto and Sahlstrom (2009), Iatridis and Dalla (2011), Ibiamke and Ateboh-Briggs (2014), Sovbetov (2015), Achalapathi and Bhanusireesha (2015), Markelevich et al. (2016), Yahya et al. (2016) and Chandrasekar and Kumar (2017), where they reported an increase in income statement items and profitability ratios. But in contrast to these studies, we found that net profit and net profit margin was lowest under IFRS.

Regarding the effect of the IFRS and Ind AS on the gap between accounting value and market value, it was indicative that book value is further from the market value when IGAAP were applied than when IFRS or Ind AS were applied. This indicates that the relevance of financial reporting for decision-making in the capital market increased when IFRS and Ind AS are applied. This is in line with the study of Khanagha et al. (2011) and Gulhan (2012) and is in contrast with the study of Callao et al. (2007).

CONCLUSIONS

The study had two objectives: to analyse the quantitative impact of IFRS and Ind AS on the accounting figures and financial ratios of selected listed Indian companies and to study the effect of IFRS and Ind AS on the relevance of financial reporting of these companies.

The result of the study indicated that the image of these companies differs under the three set of standards. The findings indicated an increase in liquidity and profitability position 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.

With respect to the effect of IFRS and Ind AS on financial reporting relevance, we may conclude that IFRS and Ind AS have positively affected the relevance of financial reporting as the gap between a firm's book and market value narrowed under these standards as compared to Indian GAAP.

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 policymakers 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 the global scenario, there are two sets of IFRS – one is IFRS for corporates and second 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 parallel. So, in line with IFRS for SME, India should also move towards bringing about 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 harmonise 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 a multiple sets of standards in the country for a 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 companies were mainly from IT sector. Therefore, a generalisation of the 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. Nevertheless, it would be worth repeating the similar kind of study for all listed companies which have implemented Ind AS or which are in the process of implementing Ind AS.

Since, India will not adopt IFRS but has converged to Ind AS, from 2016 to 2017, further studies on the impact of Ind AS with extended sample size can be carried out to measure the financial performance of the companies' pre- and post-Ind AS application. 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. Also, 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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Appendix A

Descriptive Statistics for Accounting Figures

Variable Under I-GAAP	Minimum	Maximum	Mean	Median	Std. Deviation
Non-current Assets	6423.316	1891373.000	398707.661	116740.500	629223.473
Property, Plant & Equipment	51.855	732172.000	159476.101	47994.500	253400.582
Current Assets	154.083	1153151.300	301980.033	163416.000	342641.353
Quick Assets	83.125	650828.800	213097.491	103328.500	225323.735
Total Assets	6577.399	2692976.000	700687.694	391936.000	862835.282
Shareholder's Equity	5004.345	816709.300	288183.203	244787.500	276491.719
Long Term Debt / Borrowings	0.000	897745.000	135089.278	6909.674	271455.766
Non-Current Liabilities	357.000	1007711.000	173337.155	15631.000	337448.102
Current Liabilities	697.295	1108204.600	239167.336	111699.000	334399.800
Total Outside Liabilities	1573.054	1876266.700	412504.491	121488.500	654159.404
Revenue	1304.732	2755611.100	629377.029	334728.000	852399.413
Operating Income / Profit	601.729	286418.300	93436.160	58563.000	100930.589
Net Income / Profit	824.434	242918.200	67054.042	37909.500	79188.662
Variable Under IFRS	**Minimum**	**Maximum**	**Mean**	**Median**	**Std. Deviation**
Non-current Assets	4844.598	2019933.000	412232.653	125751.500	649361.572
Property, Plant & Equipment	50.250	670065.000	160598.533	54083.500	240844.506
Current Assets	154.083	1099440.400	302303.568	174288.500	332759.451
Quick Assets	83.125	627761.200	211253.850	113112.500	220124.795
Total Assets	5120.294	2619981.300	714536.221	403841.500	871846.129
Shareholder's Equity	4568.897	768036.700	321429.913	268982.000	303253.910
Long Term Debt / Borrowings	0.000	544862.500	107118.997	6907.174	206046.173
Non-Current Liabilities	54.520	958066.000	171139.263	19862.821	327984.728
Current Liabilities	473.194	1067689.300	221967.045	89238.000	327987.496
Total Outside Liabilities	527.714	1851944.600	393106.308	99675.000	642930.533
Revenue	1304.732	2675103.200	616990.269	333574.000	828121.913
Operating Income / Profit	548.847	320693.038	95064.222	63320.000	105899.898
Net Income / Profit	535.669	245862.894	66256.946	40675.000	79142.983
Variable Under Ind AS	**Minimum**	**Maximum**	**Mean**	**Median**	**Std. Deviation**
Non-current Assets	5679.384	2028680.000	414538.264	124359.000	661158.233
Property, Plant & Equipment	51.854	649270.700	147185.817	47312.500	228535.178
Current Assets	154.082	1099236.700	301253.723	173324.000	332960.340
Quick Assets	83.124	632643.500	214884.137	104165.500	224522.623
Total Assets	5896.046	2671411.500	715791.987	399717.000	883347.043
Shareholder's Equity	4665.923	793852.500	321483.385	265491.000	305993.436
Long Term Debt / Borrowings	0.000	892686.000	132439.549	6892.741	266699.923
Non-Current Liabilities	378.000	947954.000	171879.532	19381.000	330198.804
Current Liabilities	473.192	1070494.300	222429.070	88782.000	328996.535
Total Outside Liabilities	1230.123	1877559.000	394308.602	99103.000	647303.821
Revenue	1289.562	2776605.900	626176.906	334061.500	855536.435
Operating Income / Profit	607.428	287890.000	96578.808	59730.500	103618.174
Net Income / Profit	975.983	243380.000	68990.317	45118.000	79433.195

Appendix B

Descriptive Statistics for Ratios

Variable	Minimum	Maximum	Mean	Median	Std. Deviation
Current Ratio	0.221	3.055	1.681	1.591	0.919
Quick Ratio	0.119	2.650	1.251	1.030	0.847
Debt Ratio	0.125	0.779	0.447	0.444	0.218
Long Term Debt – Equity Ratio	0.000	1.805	0.408	0.118	0.568
Fixed Asset Turnover Ratio	1.394	10.739	6.567	5.914	3.261
Return of Total Asset	7.842	35.442	15.993	13.180	8.773
Return on Equity	11.265	41.304	22.478	20.886	8.792
Return on Capital Employed	4.392	41.235	18.780	16.733	10.581
Operating Profit Margin	7.164	46.119	19.991	15.743	10.688
Net Profit Margin	4.000	63.188	17.869	13.285	17.137
EPS	3.250	126.150	45.883	34.300	44.898
Variable Under IFRS	**Minimum**	**Maximum**	**Mean**	**Median**	**Std. Deviation**
Current Ratio	0.326	4.146	2.001	1.664	1.259
Quick Ratio	0.176	3.607	1.499	1.154	1.146
Debt Ratio	0.109	0.983	0.446	0.410	0.251
Long Term Debt – Equity Ratio	0.000	1.010	0.284	0.100	0.347
Fixed Asset Turnover Ratio	1.476	10.662	5.958	4.961	3.252
Return of Total Asset	6.151	39.853	16.407	13.668	9.781
Return on Equity	8.913	37.239	19.189	18.006	7.961
Return on Capital Employed	5.207	37.183	16.664	13.254	9.562
Operating Profit Margin	5.617	42.066	20.023	18.579	10.114
Net Profit Margin	3.621	41.056	15.365	12.377	11.029
EPS	2.876	124.706	44.327	30.670	43.702
Variable Under Ind AS	**Minimum**	**Maximum**	**Mean**	**Median**	**Std. Deviation**
Current Ratio	0.326	4.150	1.998	1.665	1.258
Quick Ratio	0.176	3.598	1.520	1.164	1.171
Debt Ratio	0.094	0.812	0.422	0.417	0.236
Long Term Debt – Equity Ratio	0.000	1.235	0.332	0.109	0.427
Fixed Asset Turnover Ratio	1.583	11.198	6.699	5.942	3.397
Return of Total Asset	8.253	36.786	16.220	13.986	8.767
Return on Equity	9.813	38.117	21.241	20.320	7.430
Return on Capital Employed	4.772	38.058	18.070	17.854	9.319
Operating Profit Margin	7.390	47.103	20.102	17.573	11.036
Net Profit Margin	4.206	75.683	19.093	12.754	20.813
EPS	3.450	133.410	46.900	34.610	46.648

Appendix C

Descriptive Statistics for Market Variables

Variable	Minimum	Maximum	Mean	Median	Std. Deviation
$|BV_{igaap} - MV|$	1015.024	4484864.800	1013632.650	470639.15	1328708.720
$|BV_{ifrs} - MV|$	397.897	4418455.245	980317.878	488589.95	1307776.741
$|BV_{Ind\ AS} - MV|$	911.108	4439730.000	980305.183	477166.05	1313673.858

Appendix D

Normality Test for Accounting Figures

Variable Under I-GAAP	Shapiro-Wilk		Anderson-Darling	
	W	p-value	A²	p-value
Non-current Assets	0.640	< 0.0001	3.337	< 0.0001
Property, Plant & Equipment	0.631	< 0.0001	3.425	< 0.0001
Current Assets	0.826	0.002	1.230	0.002
Quick Assets	0.840	0.004	1.288	0.002
Total Assets	0.781	0.000	1.729	0.000
Shareholder's Equity	0.839	0.004	1.389	0.001
Long Term Debt / Borrowings	0.558	< 0.0001	4.364	< 0.0001
Non-Current Liabilities	0.552	< 0.0001	4.525	< 0.0001
Current Liabilities	0.719	< 0.0001	2.255	< 0.0001
Total Outside Liabilities	0.630	< 0.0001	3.427	< 0.0001
Revenue	0.756	0.004	0.927	0.011
Operating Income / Profit	0.860	0.076*	0.600	0.086*
Net Income / Profit	0.837	0.040	0.637	0.05**
Variable Under IFRS	**Shapiro-Wilk**		**Anderson-Darling**	
	W	p-value	A²	p-value
Non-current Assets	0.648	< 0.0001	3.238	< 0.0001
Property, Plant & Equipment	0.646	< 0.0001	3.243	< 0.0001
Current Assets	0.839	0.003	1.126	0.005
Quick Assets	0.846	0.005	1.195	0.003
Total Assets	0.776	0.000	1.787	< 0.0001
Shareholder's Equity	0.819	0.002	1.472	0.001
Long Term Debt / Borrowings	0.543	< 0.0001	4.575	< 0.0001
Non-Current Liabilities	0.556	< 0.0001	4.451	< 0.0001
Current Liabilities	0.688	< 0.0001	2.610	< 0.0001
Total Outside Liabilities	0.618	< 0.0001	3.577	< 0.0001
Revenue	0.762	0.005	0.901	0.013
Operating Income / Profit	0.849	0.057*	0.611	0.080*
Net Income / Profit	0.829	0.032	0.661	0.059**
Variable Under Ind AS	**Shapiro-Wilk**		**Anderson-Darling**	
	W	p-value	A²	p-value
Non-current Assets	0.639	< 0.0001	3.348	< 0.0001
Property, Plant & Equipment	0.633	< 0.0001	3.425	< 0.0001

Variable Under Ind AS	Shapiro-Wilk		Anderson-Darling	
	W	p-value	A²	p-value
Quick Assets	0.833	0.003	1.368	0.001
Total Assets	0.772	0.000	1.832	< 0.0001
Shareholder's Equity	0.820	0.002	1.479	0.001
Long Term Debt / Borrowings	0.558	< 0.0001	4.342	< 0.0001
Non-Current Liabilities	0.552	< 0.0001	4.486	< 0.0001
Current Liabilities	0.687	< 0.0001	2.617	< 0.0001
Total Outside Liabilities	0.618	< 0.0001	3.572	< 0.0001
Revenue	0.750	0.004	0.947	0.010
Operating Income / Profit	0.861	0.078*	0.598	0.086*
Net Income / Profit	0.844	0.049	0.608	0.082**

* Variables found to be Normal

** In case of dissimilarity; result of Shapiro-Wilk test is considered over Anderson-Darling test

Appendix E

Normality Test for Ratios

Variable Under IGAAP	Shapiro-Wilk		Anderson-Darling	
	W	p-value	A²	p-value
Current Ratio	0.944	0.289*	0.303	0.541*
Quick Ratio	0.908	0.059*	0.641	0.081*
Debt Ratio	0.903	0.047	0.726	0.049
Long Term Debt – Equity Ratio	0.756	0.000	2.028	< 0.0001
Fixed Asset Turnover Ratio	0.929	0.434*	0.298	0.519*
Return of Total Asset	0.842	0.047	0.671	0.055**
Return on Equity	0.927	0.422*	0.335	0.430*
Return on Capital Employed	0.953	0.703*	0.236	0.714*
Operating Profit Margin	0.799	0.014	0.933	0.011
Net Profit Margin	0.715	0.001	1.104	0.004
EPS	0.814	0.021	0.795	0.025
Variable Under IFRS	**Shapiro-Wilk**		**Anderson-Darling**	
	W	p-value	A²	p-value
Current Ratio	0.913	0.072*	0.610	0.097*
Quick Ratio	0.875	0.015	0.936	0.014
Debt Ratio	0.920	0.101*	0.654	0.075*
Long Term Debt – Equity Ratio	0.792	0.001	1.783	< 0.0001
Fixed Asset Turnover Ratio	0.919	0.347*	0.366	0.358*
Return of Total Asset	0.841	0.045	0.650	0.063**
Return on Equity	0.919	0.350*	0.348	0.399*
Return on Capital Employed	0.911	0.291*	0.407	0.282*
Operating Profit Margin	0.927	0.423*	0.390	0.312*
Net Profit Margin	0.872	0.105*	0.496	0.162*
EPS	0.821	0.026	0.776	0.029

Variable Under Ind - AS	Shapiro-Wilk		Anderson-Darling	
	W	p-value	A²	p-value
Current Ratio	0.913	0.074*	0.605	0.100*
Quick Ratio	0.879	0.017	0.886	0.019
Debt Ratio	0.907	0.055*	0.702	0.056*
Long Term Debt – Equity Ratio	0.777	0.000	1.883	< 0.0001
Fixed Asset Turnover Ratio	0.928	0.431*	0.294	0.528*
Return of Total Asset	0.823	0.027	0.719	0.041
Return on Equity	0.916	0.322*	0.422	0.256*
Return on Capital Employed	0.952	0.696*	0.244	0.685*
Operating Profit Margin	0.837	0.041	0.689	0.049
Net Profit Margin	0.645	0.000	1.438	0.000
EPS	0.815	0.022	0.794	0.026

* Variables found to be Normal

** In case of dissimilarity; result of *Shapiro-Wilk test* is considered over *Anderson-Darling test*

Appendix F

Normality Test for Market Variables

Variable	Shapiro-Wilk		Anderson-Darling	
	W	p-value	A²	p-value
$|BV_{igaap} - MV|$	0.743	0.000	1.837	< 0.0001
$|BV_{ifrs} - MV|$	0.736	0.000	1.909	< 0.0001
$|BV_{Ind\ AS} - MV|$	0.733	0.000	1.936	< 0.0001