

Value relevance of accounting information: A study of pre and post implementation of Indian Accounting Standards

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Abstract

This study investigates the predictability of the financial reporting as per Indian Accounting Standards (Ind AS) and its efficacy prior to its implementation. This paper examines the value relevance of accounting information for NSE listed companies using the least square regression model on the panel data for the pre and post periods of Indian Accounting Standards (Ind AS). The period of study is 2014-2019 divided into 2014-2016 (pre-Ind AS) and 2017-2019 (post-Ind AS). Findings show that during pre-Ind AS period, the book value per share, diluted earnings per share, cash flow from operations and investing activities in the financial statements are value relevant, while the book value per share and net cash flow from operations has not shown explanatory power during post-Ind AS period. A comparison of value relevance, between both the reporting standards, revealed, that the information in the financial statements during pre-Ind AS was superior to post-Ind AS.

Keywords: 1.Financial statements, 2.Fixed effects, 3.Indian Accounting Standards, 4.Ind AS, 5.Nifty 50, 6.Share price, 7.Value relevance.

Introduction

Financial statements are the report cards of the business organisations, which provide valuable information to the stakeholders', assisting them, to assess the functioning of the organisation. The organisations communicate their financial position to the stake holders through these financial statements. As the firm's financial needs grow, organisations resort to raise funds from various external sources, and these statements turn out to be excellent channel of reaching out to the interested investors, who rely upon these statements for their decision of associating with the organisation, thus, it is imperative to have robust reporting systems to convey a fair view of the financial condition to safeguard the interests of all the stakeholders involved. Stakeholders have specific interest based on their exposure in the organisation, and the financial statements with relevant comprehensive quantitative information supported by the relevant qualitative information assists them in taking decisions (Francis and Schipper, 1999). It is essential to have correct information in the financial statements, as this information is one of the drivers in discovering the price of financial assets (Oyerinde, D.T., 2009). As per the regulatory requirements world over, publicly traded companies shall provide financial statements in compliance with GAAP, as these documents are a primary medium of communication with their stakeholders (Omokhudu and Ibadin, 2015). The financial statements consist of balance sheet revealing the financial position, a statement of profit and loss, other comprehensive income revealing the overall performance of the firm, a statement of cash flow for the period and notes to accounts for detailed analysis. The financial statements are primary source of information for analysis and are a reference point for the stakeholders to take decisions, be it financial or non-financial (Hossain et al., 2004). Maintaining transparency and

adhering to these standards in presenting the information reduces the asymmetry in the information among the users of the statements (Ball and Brown, 1968; Oyerinde, D.T., 2009). The Intervention of regulators by prescribing the accounting standards shall ensure quality in reporting of financial information protecting the investors' interest and providing all the participants a level playing field (Vishnani and Shah, 2008).

The debacle of the capital markets in the US, in the year 1929, prompted the markets to sit and take notice of the deficiencies in financial reporting practices, and what followed was corrective action of prescribing accounting standards applicable for preparing corporate financial statements. Historically, in the modern age of commerce, the US Generally Accepted Accounting Principles (GAAP) stands to be the oldest among the accounting principles adopted across the globe. Primarily, the GAAP recommended by the nations around the world is built on the principles of materiality conciseness, reliability and consistency. Reporting is predominantly based on the accrual-based accounting, which works with the goal of providing information on future cash flows to aid investor's decisions. Experts have criticised the accrual accounting system pointing to the limitations of the materiality and the conservatism approach, which obscures the true and fair view of the financial position of the business (Hung, 2000). Questions have been raised about the relevance of the information provided in the financial statements to the stakeholders, who rely largely on these statements to make their investment decisions.

Businesses have outgrown the geographic borders and are operating in foreign lands with access to the financial markets, in this context, financial reporting as per country specific GAAP leads to difficulty in interpretation and decision making by investors. The GAAP of every nation is influenced by political and social factors, which are designed to cater to the local conditions (GehardMeueller and Kelly, 1991; Ray Ball, 2006). Some nations follow rule based accounting, while some adopt principles based and others follow a dynamic concept, this leads to divergence in reporting among countries. With each country prescribing its own GAAP, there is bound to have gaps in understanding the statements by investors from across the border. This is evident from the fact that many businesses have flourished and equal numbers have failed miserably wiping out wealth of several stakeholders, for instance, failures witnessed in the case of Lehman Brothers, World.com, Enron and Satyam are loosely attributed to the inappropriate financial reporting practices. These mixed results have raised concerns on the important principles of accounting i.e. accruals, historical costs and conservatism and the fitness of these rules in presenting the financial statements. To overcome this predicament, it was pertinent to bring in uniformity in financial reporting and efforts in this direction resulted in the announcement of International Accounting Standards in the year 1973. This effort was to bridge the gap in communicating the financial results in the international capital markets.

With an aim to make the financial statements consistent and reliable across the countries, the regulators prescribe accounting standards that are globally accepted, thus, avoiding the costs of reconciling accounts to meet the GAAP of different countries by multinationals.

To bring uniformity, transparency, and comparability in financial reporting standards, the International Accounting Standards Board (IASB) in April 2001 initiated the process of developing high quality accounting standards-the International Financial Reporting Standards (IFRS). The first IFRS financial statements were published in June 2003. As of March 2018, reporting as per the IFRS was done by 27,000 companies listed on 88 major stock exchanges across the globe. IFRS was meant to bring in higher quality in financial reporting, making the financial statements relevant to the users, reducing the asymmetry in information and curtailing earnings management (Barth et al., 2012; Ewert and Wagenhofer, 2005).

The statements are considered value relevant, when the accounting information reported has significant association with the stock prices and its returns, and also has the ability to relate and predict the firm's value and its potential growth (Ohlson, 1995). Studies show that markets draw information from the financial statements to determine the prices of the financial assets and the prices to converge towards the intrinsic value of the asset in the long run (Ou and Penman, 1989; Nilson, 2003).

Several studies were conducted on the relevance of financial reporting measuring the influence of the accounting information in the determination of the market price of the financial assets, there are contradicting results, some supporting the relevance of the statements and some otherwise. Moreover, the studies of market behaviour to the accounting information have been focused towards the developed economies (Negah, 2008) specifically revolving around earnings and the book value, and the application of those results in other economies faces epistemological bias.

India is the fastest growing economy, occupying the fifth place in terms of size of the economies worldwide attracting several foreign investors. India introduced the new accounting standards, Indian Accounting Standards (Ind AS) in the year 2016 to increase the transparency of financial statements of Indian companies. Studies on relevance of accounting information have been conducted prior to the introduction of these new standards, while this study attempts to extend the studies by undertaking to unravel the influence of the Indian Accounting Standards (Ind AS) converging to IFRS on the behaviour of the market price of the equity.

2 Literature review

Collins et al. (1997) in their research observed that the financial statements have lost its relevance as the economies have moved from the labour intensive ecosystem to the technology driven ecosystem. The findings of (Core et al., 2003) corroborated with the above findings, it revealed a decline in the value relevance of accounting information such as the cash flows, income and the balance sheet items in the new economy period, post 1990, where the valuation of the firms were valued differently than the way it was prior to 1977. The US markets indicated that the financial statements carried little value and was losing relevance during the period of study (Francis, J and Schipper, K, 1999). Similar results, the accounting information was less value relevant on adoption of IFRS when compared to the reporting based on International Accounting Standards was found in a study carried out by (Mari Paananen Cecilia Lin, 2007) on the earnings and book value of equity of German firms with the market price of the shares. Abayadeera (2010) examined 91 companies across various sectors in Australia for the value relevance of accounting information of modern industries; the study revealed that the value relevance of reported earnings declined, whereas, the book value increased during the period. A study done by (Lev and Zarowin, 1999) on 1300 firms in the US for the period 1977-96 revealed that the reported earnings, cash flows were relevant, whereas, the relevance of the book value diminished during this period. Sharma et al. (2012) in their study on the Indian markets for the period 2000 to 2008 reported that the value relevance of financial statements was insignificant. The results of the study by (Vishnani and Shah, 2008) on the value relevance of cash flow statement, which was made mandatory to be published from 2001-02 in India, suggested negligible value addition to the market. The study on the impact of reforms in financial reporting in UAE for the period 2001-2008 suggested that the value relevance of accounting information decreased post the reforms in the GAAP, in convergence with IFRS, in the year 2003 (Jamal BarzegariKhanagha, 2011). Anwer, S. Ahmed et al. (2013) in their study on the accounting quality of reporting on adopting International Financial Reporting Standards (IFRS) compared to benchmark firms that did not adopt IFRS, found no significant difference in the accounting quality between the firms adopting the IFRS or their domestic GAAP.

Contrary to the findings as mentioned above, some research studies revealed the value relevancy of financial statements in determining the market price.

The study to assess the market response to the accounting information of 68 companies listed on the Nigerian Stock Exchange for the period 2002 to 2008 revealed association of dividends, earnings and share prices; the accounting information on dividends were the widely used parameter in determining the share price (Oyerinde, D.T., 2009). It was noted that IFRS increased the quality of information under IFRS in the three European countries i.e. Austria, Germany and Switzerland, and it worked in the favour of investor's decision making (Daske and Gebhardt, 2006). Results of the study on the effect of the adoption of IFRS in the UK by (Latridis and Rouvolis, 2010) revealed a healthy transition into the new reporting environment, and also suggested that there was less scope for earnings management, making the statements more value relevant. Findings in the empirical study on the financial reports of the US firms in

the 80s, revealed, incremental value relevance of most of the fundamental information; it explained 70% variability of earnings with respect to excess returns (Lev and Thiagarajan, 1993). The study of the firms in the Chinese markets during 1999-2003, confirms the relevance of the accounting information in the share markets, and the strength in the B- and H-share markets were higher than that of the A-share market (Liu, J and Liu, C., 2007). The study on the accounting reforms in the Tunisia revealed that the cash flow and the book value of the firms were significantly associated with the market price of the shares (Ben and Nachi, 2007). Results of the study to determine the effect of the financial performance using the variables to measure the profitability and growth on the stock price of firms in Indonesia suggested a significant association between them (ZarahPuspitaningtyas, 2017). The results on the study of the relationship between the accounting information and the market price of the listed firms on the Malaysian stock exchange during the period 2012-16 post adoption of IFRS, suggested that the earnings, BVE and CFO significantly explained the variation in the share price of the firms (Abo Baker Mirza et al. 2019). Study on the explanatory power of accounting variables on the market prices of shares in Germany and the UK by (Elbakry, A. E et al. 2017) suggested that the accounting variables have long run Granger-causality on share prices in the UK than the German markets, which may be due to the German accounting standards that evolved out of a highly politicized environment in the country. Several studies have been conducted on relevance of accounting information in India and other parts of the world. However, the literature indicates a gap in the studies which is yet to be done on the market behaviour on the shares price post the introduction of new standards of accounting, the Indian Accounting Standards (Ind AS) in India. This study attempts to unravel the impact of the Indian Accounting Standards (Ind AS) converging to IFRS on the behaviour of the market price of the equity.

3 Accounting standards setting in India

The accounting principles puts the users into dilemma of its application on its usage for discovering the market price of the equities, as there is a tussle between the reliability and relevance in the information. The principle of historical cost brings in reliability with a certain amount of compromise on relevance in the current period, while the fair value of assets might bring the relevancy with dilution in reliability as valuations are more subjective (Kothari, 2001).

With the objective of providing contemporaneous, true and a fair view of the financial position of the organisation, the Institute of Chartered Accountants of India (ICAI) has prescribed Indian Accounting Standards (Ind AS) which is in harmony with the International Accounting Standards (IFRS). The introduction of the new accounting standards and its revisions has reduced the gap between the Indian Accounting Standards (Ind AS) and IFRS, recognized as Global Financial Reporting Standards, making the financial information comprehensive and investor friendly (ICAI, 2018). These accounting reforms were endorsed by the Government of India, which meant that, all the Indian companies except banks and NBFCs shall present their accounting information in schedule III as per Sec 129 of Companies Act, 2013 in compliance with Indian Accounting Standards (Ind AS) from the accounting year 2016.

4 Objectives of the study

The general objective of the study is to examine the quality of accounting information in the financial reporting during pre and post periods of implementation of Indian Accounting Standards (Ind AS) and to examine the influence of the accounting information on the market price of the shares in India. The specific objectives of the study are laid out as under

1. Evaluate the impact of the Accounting standards in India on the market price of the shares
2. To investigate the value relevance of financial information for pre and post Ind AS periods

5 Methodology

The Government of India had made it mandatory for all the Indian companies except banks and NBFCs to report their financial statements as per Ind AS from the accounting year 2016-17. The study is for a period of six years from 2014-2019 divided into 2014-2016 (pre-Ind AS adoption) and 2017-2019 (post-Ind AS adoption). The balanced panel data of 38 companies listed on NSE is examined to evaluate the

predictive ability of the accounting variables in the Indian markets. Nifty 50 is a benchmark of broad based stock market index for the Indian equity market. Nifty 50 is represented by 50 companies comprising of 23 sectors. Companies listed in Nifty 50 as on March 2019, were selected for the study, of these 50 companies, 11 companies from Banking and Non-Banking Finance sectors were excluded for the study as they were exempted from reporting as per Ind AS and 01 company from the auto sector was also excluded as the company transitioned into a new accounting period and the necessary financial information was unavailable on the date of study. The data was collected from the secondary sources which include the websites of NSE, SEBI, Ministry of Corporate Affairs, individual companies, publication houses and statistical websites of the Government of India.

To capture the overall financial performance and position for the period of study, accounting variables for profitability and the firm's worth has been included. The accounting information represented on cash basis was captured by the variables from the cash flow statement. The share price of the firms, quoted on the NSE indicated the market price in the study. The dependant variable is taken as the market price of the share and the independent accounting variables are, the book value per share (BVPS), the diluted earnings per share (DEPS), the net cash flow from operating activities (NCFOA) and the net cash flow from the investing activities (NCFIA).

Accounting variables have a contemporaneous impact on the market returns in the short run, which is visible during the announcement of the results by the corporates; this new information gets factored in share price in few days (Fama. E.F et al, 1969). For the purpose of this study, the market price at the end of the 5th day of trading session, post the announcement of the financial results of the company is considered.

The Ohlson pricing model is employed to determine the association of the accounting variables on the stock returns (Penman, S.H et al, 2007). The data for six years from 2014-2019 is collected for analysing, and the regression equations are framed on the model to study the association of the market price of the share and the accounting variables for the pre-Ind AS period (2014-16) and post-Ind AS period (2017-19).

We have selected the fixed-effect model, as these models are effective in panel data to determine the association among the variables (Angrist and Pischke, 2009). Fixed effect method allows to factor the individuality among each firm, as they belong to different industries on the assumption that the unobserved fixed-effects are correlated with the main explanatory variables across time (Greene, 2008). The financial information in the time series capture the influence of trends (i.e. inflation), this may be spuriously related due to the influence of such variables that aggregate over time. Hence to control the market wide shock over time, a fixed effect on the period is employed in the panel data.

6 Variables in the study

The dependent and the independent variables considered for the study are discussed below.

6.1 Dependent variable:

6.1.1 Market Price per share (MPS): Market price is the price discovered in the secondary markets by various market participants who rely on the information flow from several sources in the market place. We have assumed that the financial information from the accounting information released by the company also influences the market price. The 5th day share price at the market close (5DMP) is considered as the dependant variable in this model.

The independent variables employed in this model capture a summarised view of the performance of the firm and its financial position for the year both on accrual and cash basis.

6.2 Independent variables:

6.2.1 Book value per share (BVPS): Book value of the share is the value of each share based on the financial position of the firm. The data provided in the balance sheet is the outcome of the accounting principles applied in presenting the books of accounts. The balance sheet is a statement of the assets and

the liabilities that are valued at historical and fair values alike. Book value is proved to be value relevant (Clarkson et al, 2011), it is expected that the book value per share influences the share prices.

6.2.2 Diluted earnings per share (DEPS): Diluted earnings per share are the residual earnings of the company which the shareholders along with the owners of convertible instruments enjoy at end of the year. This is the outcome of the performance of the firm for the current accounting period. This disclosure assists the investors to have a better understanding of the effect of potential dilution (Livant and Segal, 2000).

Cash Flow: Cash flow statement is an accompanying document which is prepared as per the cash basis; this complements information of the financial statements that are presented on accrual basis.

6.2.3 Net cash flow from operating activities (NCFOA) is a component of the cash flow statement that explains the viability of the firms operations and its solvency position. This is the amount of cash either generated or lost due to the operations of the company.

6.2.4 Net cash flow from the investing activities (NCFIA) is forward looking, as it provides the future course of action of the firm. This component of the cash flow statement is a reflection of the strategies of the firm and the direction of the firm's plans.

7 Results and Findings

Table-1
Descriptive statistics - pre-Ind AS (2014-2016)

	5DMP	LOGBVPS	DEPS	NCFIA	NCFOA
Mean	1057.957	5.296487	45.12747	-6876.073	10177.16
Median	551.5500	5.323888	26.80000	-2594.895	5577.470
Maximum	4267.550	8.261780	225.5000	63632.56	53270.38
Minimum	104.7000	2.800933	-52.77000	-73070.00	-7142.770
Std. Dev.	1026.537	1.079125	48.22669	14089.38	12081.35
Skewness	1.308453	0.037888	1.179648	-0.917665	1.742472
Kurtosis	3.646204	2.938740	4.547526	13.61852	5.644793
Jarque-Bera	34.51243	0.045101	37.81528	551.5770	90.91389
Probability	0.000000	0.977702	0.000000	0.000000	0.000000
Sum	120607.2	603.7995	5144.532	-783872.3	1160196.
Sum Sq. Dev.	1.19E+08	131.5898	262816.9	2.24E+10	1.65E+10
Observations	114	114	114	114	114

Table-2
Descriptive statistics - post-Ind AS (2017-2019)

	5DMP	LOGBVPS	DEPS	NCFIA	NCFOA
Mean	1188.717	5.350372	47.64482	-9394.184	20547.80
Median	533.2750	5.288416	27.11500	-3305.315	7587.900
Maximum	8743.700	7.352390	260.8800	15396.00	1062731.
Minimum	133.1000	3.444257	-84.89000	-99006.00	-14841.00
Std. Dev.	1510.157	0.939830	55.07237	16472.33	99433.96
Skewness	2.535130	0.088306	1.853268	-2.760073	10.23323
Kurtosis	10.22494	2.428932	7.220992	12.48090	107.7441
Jarque-Bera	370.0599	1.697222	149.8871	571.7071	54103.43
Probability	0.000000	0.428009	0.000000	0.000000	0.000000
Sum	135513.7	609.9424	5431.510	-1070937.	2342449.

Sum Sq. Dev.	2.58E+08	99.81066	342725.2	3.07E+10	1.12E+12
Observations	114	114	114	114	114

The descriptive statistics of the variables employed in the model given in Table-1 & Table-2 reveals interesting facts of the firms. Of the total 114 observations of the firms, each over three years during pre-Ind AS (2014-16) and post-Ind AS (2017-19) has shown an upward growth in market price of the share in their mean price, when compared to the pre-Ind AS, the market prices have risen over this period, indicating the market participants have evinced interest in investing in the shares, this can also be attributed to the above mentioned variables and other unobserved market factors. However, the median of the share price post-Ind AS period has dropped considerably over the previous reporting period, indicating an equal number of companies have not found favour in the market when compared to the past as the prices of these shares slid below the mean, indicating only few companies in the market command a higher share price. A total of 19 companies on an average are priced below Rs.533 post-Ind AS, this is confirmed from the rise of the maximum and the minimum price of the shares at Rs.8743 and Rs.133 respectively over the past.

The book value and the earnings per share when compared with both the periods shows almost the same averages with a slight leaning on the higher side post-Ind AS, however the minimum EPS of the post-Ind AS numbers reveal that companies have reported deep losses in this period when compared to the past, this may be due to the economic slowdown and was prevalent in the auto sector.

The study of the net cash flow from investing activities is forward looking, a higher mean spending in the post-Ind AS period when compared to the pre-Ind AS, indicates that the companies have higher spending in the assets, and a better outlook, which is corroborated from the maximum spending which has gone up by 35%. The median indicates that half of the population on an average have spent Rs.3305 crores, which is considerably lower than the mean. However, there is a growth in the median in the post-Ind AS period. The Net cash flow from operations has gone up by 101% over the pre-Ind AS period (2014-16). The Jarque-Bera statistics indicates, that barring the book value of the shares which are normally distributed, the others don't confirm, this is a common feature in financial time series.

Table-3 Correlation - pre-Ind AS (2014-2016)

	5DMP	LOGBVPS	DEPS	NCFIA	NCFOA
5DMP	1.000000	0.639884	0.816873	0.169318	-0.256685
LOGBVPS	0.639884	1.000000	0.624961	-0.157523	0.133530
DEPS	0.816873	0.624961	1.000000	0.020780	-0.098949
NCFIA	0.169318	-0.157523	0.020780	1.000000	-0.497930
NCFOA	-0.256685	0.133530	-0.098949	-0.497930	1.000000

Table-4 Correlation - post-Ind AS (2017-2019)

	5DMP	LOGBVPS	DEPS	NCFIA	NCFOA
5DMP	1.000000	0.583832	0.837417	0.155585	-0.078915
LOGBVPS	0.583832	1.000000	0.664936	-0.123526	-0.170439
DEPS	0.837417	0.664936	1.000000	0.066361	-0.077443
NCFIA	0.155585	-0.123526	0.066361	1.000000	-0.074451
NCFOA	-0.078915	-0.170439	-0.077443	-0.074451	1.000000

The correlation matrix given in the Table-3 and Table-4 revealed that all the variables in the model are correlated, indicating association between them, while the net cash flow from investing activities indicated a weak correlation with the 5th day market price over other accounting regressors in both the periods. The net cash from operating activities indicated a negative correlation, with all the variables, barring book value, which weakened post-Ind AS period, while a strong negative correlation existed

between net cash from operations and net cash from investing activities in pre-Ind AS period, which may be due to the behaviour of higher capital spending, resulting from higher revenue earnings, but the relationship between them, weakened, post-Ind AS period.

The regression model for the pre-Ind AS and the post-Ind AS given in Table-5 and Table-6 shows mixed results of the influence of the regressors on the regressand. The R² of 0.76 in the model for the period 2014-16 indicates that the model fits to explain 76% of the variance in the 5th day market price after results through the DEPS, BVPS, NCOFA and NCFIA when taken as independent variables in the model. The Accounting Standards that were applied prior to the introduction of the Ind AS in 2016 revealed that all the independent variables were significant at 5% level and influenced the market price of the listed shares. The fixed effect model for the post-Ind AS period showed a R² of 71% which indicates a good fit for the 5th day market price during this period. It revealed that the BVPS is positive but is insignificant and similar insignificance is noticed in the case of NCFOA.

The comparison of the R-square in the results of the models in both the periods revealed that, the model for the pre-Ind AS period (2014-16) indicated relatively high adjusted R² and F Statistic suggesting that the DEPS, BVPS, NCFIA and NCFOA has a higher information content when compared to the post-Ind AS period (2017-19).

The BVPS which was significant in influencing the market price in the pre-Ind AS has become insignificant in post-Ind AS reporting. Similarly, the NCFOA was significant in the pre-Ind AS regime has turned insignificant in the post-Ind AS period. The NCFIA and the DEPS has been significant in both the models and both have a positive influence on the 5th day share price in the market. It appears that the Indian Accounting Standards (Ind AS) which embraces the IFRS has diminished the relevance of the accounting variable of BVPS and the NCFOA. The results indicate that the reporting under the GAAP had a better predictive power of the market price when compare with the reporting as per the Ind AS.

8 Conclusions

Based on the results, we conclude that BVPS, DEPS, NCFOA and NCFIA in the financial statements are value relevant during pre-Ind AS period and BVPS and NCFOA have not shown explanatory power during post-Ind AS period. A comparison of value relevance between both the reporting standards revealed that the financial statements were superior during pre-Ind AS when compared to post-Ind AS.

9 Scope for further research

This study can be extended to include the influence of macroeconomic factors on the market price of the shares for the periods of pre- and post-Ind AS reporting. As the Fixed effects model indicates the presence of an association, further studies to establish the causality of the findings may be made.

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