
Convergence of Indian accounting standards to IFRS: impact on quality of financial reporting of Indian industries

Sushma Vishnani*

Jaipuria Institute of Management,
Vineet Khand, Gomtinagar, Lucknow, India
Email: sushma.vishnani@jaipuria.ac.in

*Corresponding author

Saumya Gupta

Mahindra & Mahindra Financial Services Limited,
Mahindra Tower, Faizabad Road, Indirinagar, Lucknow, India
Email: saumyagupta996@gmail.com

Hemendra Gupta

Jaipuria Institute of Management,
Vineet Khand, Gomtinagar, Lucknow, India
Email: hemendra.gupta@jaipuria.ac.in

Abstract: This paper assesses whether the mandatory implementation of IndAS (IFRS converged Indian accounting standards) will result in higher financial reporting quality. Particularly, it studies the effect of adopting IndAS by Indian companies on earnings management, earnings persistence, and value relevance of the reported financials. The study contributes to existing body of literature by being a pioneer study for Indian industries, signalling areas of concern for regulators in India and global investors interested in Indian markets. Research findings indicate some improvement in the quality of reported financials after implementation of IndAS. Research output reveals enhancement in market-based measures. However, accounting-based attributes yield mixed findings. While no statistically significant difference is reported by earnings management metrics, the earnings persistence measure shows distinct improvement.

Keywords: earnings quality; earnings management; International Financial Reporting Standards; IFRS; Indian accounting standards; IndAS; financial reporting quality.

Reference to this paper should be made as follows: Vishnani, S., Gupta, S. and Gupta, H. (2021) 'Convergence of Indian accounting standards to IFRS: impact on quality of financial reporting of Indian industries', *Int. J. Managerial and Financial Accounting*, Vol. 13, No. 1, pp.1–24.

Biographical notes: Sushma Vishnani is a Professor in Finance and Accounting and a qualified Chartered Accountant having 20 years of extensive experience in statutory, internal, tax, revenue and concurrent audits of corporate, banks, state level corporations, project financing and management

consultancy. She has published research papers on brand valuation, value relevance of financial reporting, quality of financial reporting, earnings management, accounting conservatism, asset pricing and working capital management in reputed journals.

Saumya Gupta is the Assistant Manager in the Mahindra & Mahindra Financial Services Limited, India. She holds a Postgraduate Diploma in Management in Financial Services. Her research interests are earnings management, financial reporting and earnings quality.

Hemendra Gupta has experience of more than 20 years which is a blend of industry and academics. In industry, he has spent more than eight years in the ICICI Prudential Life Insurance Co. Ltd. in Training and Sales Profile. He has also conducted various training programs in various areas of finance and wealth management. He is presently a faculty in the area of finance in the Jaipuria Institute of Management, Lucknow and have been associated with Amity Business School in the past and also have been a Visiting Faculty to ICAI, ICWAI, ICFAI and Lucknow University. He is a member of professional bodies like the Cost and Management Accountant, Financial Planning Standard Board of India, Insurance Institute of India, Indian Institute of Bankers, by virtue of the respective qualification. His areas of interest include research, consultancy and training in investment and wealth management, valuations, financial modelling and corporate finance.

1 Introduction

IASB designed the International Financial Reporting Standards (IFRS) with primary objective “to develop, in the public interest, a single set of high quality, understandable, enforceable and globally accepted International Financial Reporting Standards (IFRS Standards) based upon clearly articulated principles.” Financial statements prepared using these standards are comparable across companies and countries. Multi-nationals can use uniform accounting policies and principles for preparing financial statements throughout the organisation. Adoption of IFRS will help companies in raising funds from foreign or global capital markets, making them capable of competing for capital in foreign countries. Presently, 166 countries have either adopted IFRS as is, or converged their national accounting standards with IFRS.

ICAI played a critical role in driving the process of establishing globally accepted accounting standards for India. ICAI could finally succeed in its drive in 2015 in establishing the IFRS-converged Indian accounting standards (IndAS) when Government of India approved this change. While framing IndAS, ICAI tried to have minimal deviations from IFRS unless felt necessary because of the economic conditions, prevalent practices and regulatory structure of India. On 16 February, 2015, Ministry of Corporate Affairs, Government of India, notified phased mandatory implementation of IFRS converged accounting standards in India. Listed entities having owners’ funds greater than Rs.500 crores were mandated to implement IndAS (IFRS converged IndAS) effective from 1/4/2016 (first phase). All listed companies of India (other than those listed on SME exchanges and other than companies covered in the first phase) were required to mandatorily adopt IndAS w.e.f. 1 April 2017 (second phase). However, till date, financial services companies have not been mandated to implement IndAS.

Prior researches on adoption of IFRS (previously known as IAS) have depicted numerous benefits linked with quality of financial information reported using IFRS. Covrig et al. (2007) showed greater flow of foreign investment for entities which have embraced IAS. Li (2010) has proven, in her study about compulsory implementation of IFRS in EU countries, substantial drop in cost of equity of the companies domiciled in the countries with robust legal system. An event study done around IFRS implementation in EU, to capture investor's perceptions about benefits (such as better information quality, decreased funding cost) arising on implementing IFRS, reflected positive sentiments (Armstrong et al., 2010).

Mixed findings have been reported by earlier empirical studies on the impact of IFRS implementation on quality of reported financials. Bartov et al. (2005) exhibited that although espousal of IAS by German firms enhanced value relevance (VR) of financial statements of profitable companies, similar finding was not supported for loss making companies. Munteanu et al. (2014) depicted that Romanian companies' financial information reflected no change in quality during pre-IFRS and post-IFRS phases. Callao et al. (2007) revealed in their study about adoption of IFRS in Spain, that relevance of reported financials for native stock market players worsened since implementation of IFRS. On the other hand, many prior researches have shown improved earnings quality on implementation of IFRS in terms of better comparability of financials across companies (Clarkson et al., 2011), higher VR (Müller, 2014), more conditional conservatism (Barth et al., 2008) and lower management of reported income (Barth et al., 2008). Thus, whether IFRS improves quality of reported financials or not remains an open research question. Further, no such study has been attempted in the Indian context till date. This research is primarily undertaken to bridge the gap by analysing how implementation of IndAS influences quality of reported financials of Indian companies.

Past studies emphasise upon the manifold aspects of earnings quality. Scholars, by and large, use several measures to capture them in their analysis (Fan and Wong, 2002; Zeghal et al., 2012; Sloan, 1996). In this study, accounting-based as well as market-based measures of quality of reported financials are used. Following Dechow et al. (2010), earnings management (EM) (Cho et al., 2015; Nouri and Abaoub, 2016; Liu et al., 2011) and earnings persistence (EP) (Liu and Sun, 2015), are used as accounting-based measures. VR (Müller, 2014; Callao et al., 2007; Farooque, 2016) is used as market-based measure. Flexibility in GAAPs permits managers to pull off their individual schemas while reporting financials. Schipper (1989) defines 'EM' as "a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as opposed to, say, merely facilitating the neutral operation of the process)." More persistent earnings signal sustainability of earnings, hence have more informational value for investors (Dechow et al., 2010). Implications of sustainability on earnings performance of companies were highlighted by Rokhmawati et al. (2017) with respect to environmental aspects, and by Festa et al. (2020) with respect to intellectual capital development. VR is assessed by adeptness of reported financials in denoting information which significantly affects share prices (Francis and Schipper, 1999).

This study uses data from FY 2016 to 2019 for Indian listed companies which were mandated to apply IndAs w.e.f. 1 April 2017. The study focuses on analysing distinctive features of financial reporting that have implications for reporting quality, during pre-IndAS phase (2016–2017) and post-IndAS phase (2018–2019). Control variables used in the study are cash flows, sales, return on assets, size, leverage, growth and age. Also, industry and year fixed effects are applied. Our findings reveal mixed signals for

incremental effect on financials' quality during post-IndAS phase. Results do not reflect any major alteration in EM between the two periods. However, EP and relevance of financial reporting show marked improvement.

Current research adds to relevant body of work in three respects. First, most of the studies done till date were in theme context of IFRS adopters (voluntary as well as mandatory); very few studies explored the impact of IFRS converged domestic set of accounting standards on earnings quality. Second, earlier studies were done in the context of a country or countries; while this study stands apart by studying the impact for listed companies of India. It additionally explores how IFRS converged IndAS influence EM practices of Indian key industries: capital goods, FMCG, health, auto, metal, oil and gas, telecom, tech and consumer durables. This adds to the robustness of our study. Third, this study is the first of its kind in the Indian context. To date, no such study has been attempted for Indian companies. Most prior studies in this domain were for EU countries (Capkun et al., 2008; Munteanu et al., 2014; Callao et al., 2007; Paananen and Lin, 2009; Armstrong et al., 2010; Ball, 2006; Nouri and Abaoub, 2016; Bartov et al., 2005; Gassen and Sellhorn, 2006; Van Tendeloo and Vanstraelen, 2005; Zeghal et al., 2012; Houqe et al., 2016; Hung and Subramanyam, 2007; Karampinis and Hevas, 2011; Li, 2010; Dimitropoulos et al., 2013). A few studies were for Australia (Jeanjean and Stolowy, 2008; Farooque, 2016), Canada (Liu and Sun, 2015) and Asian (Liu et al., 2011; Cho et al., 2015; Ghani et al., 2017) countries. India, being one of the major players in Asia, with keenness to attract foreign investment for development purposes, it is appropriate to conduct this type of study.

Remaining parts of this paper are arranged as follows. Section 2 details literature review and hypothesis development. Section 3 explains the models that are used to conduct the study. Section 4 gives information on data used for this study. Section 5 exhibits the empirical findings. Section 6 presents concluding remarks and Section 7 lists some managerial implications of the research findings.

2 Literature review and hypothesis development

IASB's conceptual framework for financial reporting emphasise on two fundamental qualities, 'relevance' and 'faithful representation', to enhance the utility of reported financials for users. Several past researches explored the effect of IAS/IFRS adoption upon these two attributes (Armstrong et al., 2010; Ball, 2006; Karampinis and Hevas, 2011; Chalmers et al., 2012; Zeghal et al., 2012). Other attributes of reported financials' quality explored in the IFRS adoption perspective are: timeliness (Zeghal et al., 2012), EP (Gassen and Sellhorn, 2006), predictability (Gassen and Sellhorn, 2006) and comparability (Li, 2010; Daske et al., 2008). Adoption of IFRS is expected to yield benefits such as reduced cost of evaluating investment opportunities and enhanced quality of information (Ball, 2006). Expected benefits are hypothesised on the basis of the presumption that IFRS shall impart more clarity to financial statements and restrict managers' ability to manoeuvre financial reporting, thus improving the quality of reported financials (Newman et al., 2016). Past researches on IFRS and the quality of reported financials during the last two decades have depicted mixed results (Christensen et al., 2009).

2.1 *Mandatory adoption of IAS/IFRS and reporting quality*

Daske et al. (2008) reported enhancement in reporting quality of firms mandated to use IAS in 26 countries in terms of increased market liquidity, lower cost of capital and better valuations. But these economic gains resulted only in countries having effective regulations and governance structures. Müller (2014), Capkun et al. (2008), Dimitropoulos et al. (2013), Liu et al. (2011), Armstrong et al. (2010) and Zeghal et al. (2011) also reported enhancement in quality of reported incomes in post-IFRS mandatory period. Superior earnings quality led to higher level of faith amongst investors (Armstrong et al., 2010). Zeghal et al. (2011) depicted in their study on French companies that EM reduced more for well-governed companies. Contrary to these studies, Li (2010) proved decline in earnings quality in his study on German listed entities, post-mandatory IFRS implementation. Similar findings were reported by Jeanjean and Stolowy (2008) and Krishnan and Zhang (2019) with regard to French companies and Canadian companies, respectively. However, they reported insignificant change in earnings quality for the UK and Australian companies. Also, Callao et al. (2007) reported insignificant change in reported financials' VR by Spanish companies during and pre-and-post-IFRS regimes. Similarly, Paananen and Lin (2009) depicted no change in earnings quality for Sweden post-mandatory adoption of IFRS. Farooque (2016) reported mixed results of earnings quality for Australian firms; while EM practices depicted significant decline post-IFRS adoption, VR of reported financials almost dissipated during post-adoption phase.

Literature review reveals that although the topic has been well researched in the past, findings are mixed in nature. This leaves room for further probing in this direction. This study is undertaken for furtherance of existing literature. Further, although 166 countries worldwide have adopted IFRS or IFRS-converged accounting standards, researches are limited mostly to European countries, very few papers exist for Asian countries. Hence, this paper attempts to plug this gap in literature using robust research methods and three measures of quality of reported financial figures – EM, VR and EP – for exploring the impact of mandatory IndAS implementation in Indian companies. India being an emerging economy and a major player in Asian markets, such a study is highly desirable and relevant. Lastly, all prior researches in this domain emphasise country specific findings. This study attempts to give insights on industry specific findings too, for leading Indian industries.

2.2 *Hypothesis development*

The IFRS Foundation is entrusted with the task of developing superior financial reporting standards which can be embraced by businesses worldwide, with the purpose of promoting transparency, comparability, utility and relevance of the financial information reported. The conceptual framework of IFRS asserts some quality-enhancing features to improve utility of reported financials for users. These features are categorised as 'fundamental' and 'enhancing'. 'Relevance' and 'faithful representation' are the fundamental features. 'Comparability', 'verifiability', 'timeliness' and 'understandability' are the enhancing features.

Prior researches have explored changes in reported financials' quality subsequent to IFRS implementation (as mentioned above). These studies have probed one or more of the quality-dimensions enumerated in the IFRS's conceptual framework. Past studies

have extensively explored the ‘relevance’ feature of IFRS reporting. Barth et al. (2008) depicted that financial reports that use IFRS depict more VR for investors in case of voluntary adoption. Such behaviour is on account of greater level of ‘comparability’ across firms of various countries. Liu et al. (2011) showed improved VR for Chinese companies during the post-mandatory adoption-IFRS phase. Müller (2014) also reported similar findings for consolidated financials of firms listed in European exchanges. However, Zeghal et al. (2012) portrayed decline in VR on their mandatory adoption in European Union. Similar findings were reported by Farooque (2016) for Australian companies.

Another dimension on which earnings quality has been studied in accounting literature is EP. Higher level of persistence in accounting income implies a more sustainable stream of income or cash flows. This enhances predictive value of earnings and makes it more relevant for investors. Better projections can be done in such a scenario, which will enhance reliability of the equity valuation models (Dechow et al., 2010). Liu and Sun (2015) proved in their study on Canadian companies that mandatory application of IFRS has made earnings more persistent. On the other hand, a later study done in the context of Canada by Krishnan and Zhang (2019) revealed lower level of EP for Canadian firms under IFRS reporting in comparison to CGAAP reporting. Farooque (2016) reported minor improvement in sustainability of earnings during post-mandatory IFRS phase in Australia.

‘Faithful representation’ has been a well-researched aspect of quality in accounting literature. This quality parameter requires financial information to be comprehensive, error-free and free from biases. IFRS is believed to enrich financials’ quality as it checks the EM practices of managers by providing robust mechanisms of reporting practices. Ewert and Wagenhofer (2005) reported drop in EM practices in post-adoption IFRS phase for companies volunteering to choose IFRS. Farooque (2016) and Chen et al. (2010) reported similar findings for Australia and EU respectively, on compulsory application of IFRS. However, Liu and Sun (2015) reported no substantial influence of the mandate of IFRS on Canadian firms’ EM practices. Similar were the findings in Jeanjean and Stolowy (2008), Grecco (2013) and Wang and Campbell (2012) for Australian, Brazilian and Chinese companies, respectively.

Prior studies have explored the ‘timeliness’ aspect of IFRS financials using market-based approach, which entails assessing the impact of financials reported by a firm on market prices and returns. Zeghal et al. (2012) reported decline in earnings quality on this parameter during post-mandatory IFRS period. To be useful, timely reporting is a pre-requisite. Liu and Sun (2015) reported no change in timeliness coefficient of reported earnings in post-IFRS time-period in Canada; thus, IFRS implementation had not enhanced the decision worthiness of reported financials.

IFRS-converged Indian AS, mandated by Indian Government, is envisaged to considerably improve the financial reporting structure of Indian companies which can make it comparable with global benchmarks. Thus, it is desirable that the reported financials of Indian companies depict the qualitative aspects (detailed above) specified in IASB’s ‘conceptual framework for financial reporting’. It is only then that benefits of globally acceptable accounting practices such as reduced cost of capital, easy access to international capital markets, comparability of Indian firm’s financials with any other country’s company and transparency and so on, shall flow to Indian firms. Hence, it is hypothesised that:

- H1 Mandatory adoption of IFRS converged IndAS will improve financial reporting quality of Indian industries.

3 Research methodology

Earnings quality has been extensively researched in accounting literature. A wide range of metrics have been deployed for appraising earnings quality of reported financials such as persistence, accruals, timeliness, conditional conservatism, relevance for investors, etc. (Dechow et al., 2010). Various metrics of earnings quality are categorised into two – accounting-based and market-based (Francis et al., 2004). Accruals quality, earnings metrics, earning smoothness and EM are the popular accounting-based metrics. The commonly used market-based metrics are VR and asymmetric timeliness.

To test the hypotheses, three earnings quality constructs that have been extensively applied in past researches, i.e., EM, EP and VR, are used. For the same group of firms, quality of reported financials during pre-and-post-IndAS (IFRS converged accounting standards) periods is assessed.

3.1 Earnings management

EM is a popularly researched construct in literature for reported financials' quality. For studying quality of reported earnings on this dimension, we deploy the modified Jones (1991) model for calculating discretionary accruals (DAs) of pre and post-adoption periods. Dechow et al. (1995) demonstrated this model's superiority over Jones model. Use of modified Jones model for ascertaining DA is widespread in accounting literature, to ascertain the magnitude of EM (Guay et al., 1996). Following Collins and Hribar (2002), total accruals (the dependent variable in modified Jones model) is measured using cash flow statement method.

For this, total accruals are regressed against change in revenues (adjusted for change in receivables), and gross property plant and equipment. The cross-sectional regression model is estimated as follows for each year and industry:

$$\frac{Acc_{it}}{TA_{i,t-1}} = \alpha_i + \beta_1 \frac{1}{TA_{i,t-1}} + \beta_2 \frac{(\Delta Rev_{it} - \Delta Rec_{it})}{TA_{i,t-1}} + \beta_3 \frac{PPE_{it}}{TA_{i,t-1}} + \epsilon_{it} \quad (1)$$

where Acc_{it} is firm i 's total accruals in year t and is equal to earnings before extraordinary items and discontinued operations minus operating cash flows from continuing operations. $TA_{i,t-1}$ is the total asset of the firm i in time $t - 1$. ΔRev_{it} , the change in revenues between year $t - 1$ and year t , ΔRec_{it} is the change in receivables between year $t - 1$ and year t , and $PPE_{i,t}$ is the gross value of property, plant and equipment. All the variables in equation (1) are divided by lagged total assets to reduce heteroskedascity in residuals (White, 1980).

Residuals of the above model represent DAs. These may be positive or negative because earnings can be managed in any direction based on firm-specific requirement. Past researches have used unsigned amounts of DAs due to lack of indicative projections. Following them, we convert DAs into absolute discretionary accruals (ADA) for studying them further.

Because of the misspecification problems associated with Jones as well as the modified Jones model, it is recommended that EM practices should be studied using one more accrual model (apart from Jones model), in conjunction with Jones/modified Jones model (Lee and Vetter, 2015). Hence, we also calculate performance-matched absolute discretionary accruals (PMADA) using the method proposed by Kothari et al. (2005). In their study, they portrayed the superiority of PMADA over the ADA derived using modified Jones model for probing of EM practices. The performance-matched Jones model has been endorsed by Lee and Vetter (2015) as preferable amongst the list of various accrual models to calculate DA. Performance-matched DAs are estimated by subtracting DA of a matched firm with the closest profit performance (ROA) in the same industry and year from DA of respective firm-year.

Distributional properties of ADA as well as PMADA for pre and post-IFRS phases are analysed to assess the level of EM in the two time periods. A greater value signals lower quality of reported financials.

Next, the effect of adopting IFRS converged AS on ADA is studied by using the following model which incorporates fixed effects for years and industry. The model is based on the McNichols and Wilson (1988) framework. Various control variables, centred on prior related literature, are included in the model, i.e., size, price-to-book, age, sales, cash flow from operations, ROA and leverage. Shu and Chiang (2014) showed higher involvement in EM by larger firms as compared to smaller firms when it comes to generating short-term wealth for investors in case of seasoned equity offerings. Smith and Watts (1992) espoused that firms in their high growth phases are more enticed to indulge in EM practices. Price-to-book is taken as a control variable to capture growth aspect in this model. Age of reporting entity was found significantly influencing EM practices of Indian manufacturing firms (Das et al., 2018). Sales and cash flow from operations are also incorporated as control variables following Shivakumar (2000) and Roychowdhury (2006). Dechow et al. (1995) proved that EM hypothesis gets rejected for firms with very high level of financial performance. They emphasised the need for controlling financial performance when conducting any study about EM. Thus, ROA is taken as a control variable in the model given below. Kothari et al. (2005) also emphasised on the impact of ROA on DAs. Klein (2002) has proven the direct influence of leverage on EM practices.

$$ADA_{it} = \alpha_1 + \beta_1 IndAS_t + \beta_2 \frac{Rev_{it}}{TA_{i,t-1}} + \beta_3 \frac{CFO_{it}}{TA_{i,t-1}} + \beta_4 ROA_{it} + \beta_5 Size_{it} + \beta_6 PB_{it} + \beta_7 Age_{it} + \beta_8 Leverage_{it} + \epsilon_{it} \quad (2)$$

where ADA_t is the absolute value of DAs derived from model (1), $IndAS_t$ indicates a dummy coded one for observations in the post-IFRS-converged-Indian-accounting-standards-period and zero in the pre-IFRS-converged-Indian-accounting-standards-period, Rev_{it} is the revenue for firm i at time t , $TA_{i,t-1}$ is the total asset of the firm i in time $t - 1$, CFO_t is cash flow from operations, ROA_{it} is return on assets for firm i and period t , $SIZE_{it}$, measured as the log of total assets, PB_{it} indicated price-to-book ratio, Age_{it} is age of firm i at time t , and $Leverage_{it}$ is the long-term debt to equity ratio of firm i at time t .

We re-estimate equation (2) by using PMADA as the dependent variable. Equation (2) is also estimated with income-increasing DA (i.e., positive DA) and income-decreasing DA (i.e., negative DA) as the dependent variable separately.

For robustness reasons, an alternative measure of EM is deployed wherein we target firms who are susceptible to EM practices based on their performance. Small positive

earnings are detected by past researchers as a usual target, as managers will choose to report small positive earnings rather than negative earnings (Burgstahler et al., 2006). Deploying Barth et al. (2008), the logistic regression model mentioned below is run to estimate the measure for moving toward positive earnings:

$$SPOS_{it} = \alpha_1 + \beta_1 IndAS_t + \beta_2 \frac{Rev_{it}}{TA_{i,t-1}} + \beta_3 \frac{CFO_{it}}{TA_{i,t-1}} + \beta_4 ROA_{it} + \beta_5 Size_{it} + \beta_6 PB_{it} + \beta_7 Age_{it} + \beta_8 Leverage_{it} + \epsilon_{it} \quad (3)$$

where $SPOS_{it}$ an indicator variable that equals 1 if annual net income scaled by total assets is between 0 and 0.01 (Lang et al., 2006; Barth et al., 2008), $IndAS_t$ is an indicator variable set to 1 for observations in the post-IndAS adoption period, and set to 0 otherwise, Rev_{it} is the revenue for firm i at time t , $TA_{i,t-1}$ is the total asset of the firm i in time $t - 1$, CFO_{it} = cash flow from operations, $SIZE_{it}$ = size, measured as the log of total assets, PB_{it} = price-to-book ratio, Age_{it} is age of firm i at time t , and $Leverage_{it}$ is the long-term debt to equity ratio of firm i at time t .

High occurrence of SPOS signals higher EM and thus, low earnings quality. The coefficient on $IndAS_t$ will be negative and significant when its implementation results in better earnings quality, and vice versa. However, insignificant coefficient indicates no effect on earnings quality post-adoption of IFRS converged accounting standards.

3.2 Earnings persistence

Financial reporting system should cater to the demand of investors, creditors and other users, with relevant and reliable information which could be efficiently and effectively used for the purpose of enterprise valuation and assessment of management's performance (Yuan and Jaing, 2008). Presence of EP signifies a maintainable flow of income and cash, which enhances predictive power of earnings, hence, leading to reliable inputs for valuation exercise (Dechow et al., 2010). EP is assessed by regressing current year earnings with that of previous year's, following Sloan (1996) model. For analysing the effect of IFRS-converged IndAS adoption, a dummy variable $IndAS_t$ is incorporated in the model as follows:

$$EPS_{it} = \beta_0 + \beta_1 IndAS_t + \beta_2 EPS_{it-1} + \beta_3 IndAS_t * EPS_{it-1} + Year\ dummies + \epsilon_{it} \quad (4)$$

where EPS_{it} is earnings per share for year t , and $IndAS_t$ = a dummy coded one for observations in the post-IndAS period and zero in the pre-IndAS period.

The coefficient for the interactive variable, β_3 , will be positive and significant if earnings are extra persistent, post-adoption of IndAS. This will indicate better earnings quality.

Equation (4) is run using OLS as well as GMM. GMM is used since lagged dependent variable is used as explanatory variable in the model.

3.3 Value relevance

This is the market-based approach of assessing earnings quality of reported financials. VR tests establish the informativeness of the reported financial numbers for investors by studying the relationship between stock market performance parameters and key accounting information (Lang et al., 2006). Reported financials are relevant if they are

capable of influencing users' decisions. Investors see reported earnings as less useful when the possibility of EM increases (Hodgson and Stevenson-Clarke, 2000). Hence, it is believed that opportunistic management behaviour yields less trustworthy reported earnings, reducing investors' trust in the reported financials.

We use price-earnings model suggested by Ohlson (1995), where stock prices are regressed on both earnings and book value of equity. The following linear valuation model, incorporating dummy variable *IndAS*, for capturing the impact of IFRS adoption is estimated:

$$MPS_{it} = \beta_0 + \beta_1 IndAS_t + \beta_2 EPS_{it} + \beta_3 IndAS_t * EPS_{it} + \beta_4 BVPS_{it} + \beta_5 IndAS_t * BVPS_{it} + \varepsilon_{it} + Year\ effects + Industry\ effects \quad (5)$$

where MPS_{it} is market price per share of firm i at time t , EPS_{it} is earning per share of firm i at time t , $BVPS_{it}$ is book value per share of firm i at time t , and $IndAS_t =$ a dummy code, 1 for observations in the post-IndAS period and 0 in the pre-IndAS period.

We estimated the basic model as an OLS regression. We also tested through weighted least square regression. We further estimate VR, deploying nonlinear model that includes the cross-product of book value and earnings as suggested by Clarkson et al. (2011). Since IFRS proposes to move toward fair-value accounting, measurement error is likely to increase. Hence, nonlinear pricing model which includes a cross-product term is desirable (Clarkson et al., 2011). In this 'product model', the dummy variable *IndAS* is retained to capture the impact of IFRS-converged accounting standards.

$$MPS_{it} = \beta_0 + \beta_1 IndAS_t + \beta_2 EPS_{it} + \beta_3 IndAS_t * EPS_{it} + \beta_4 BVPS_{it} + \beta_5 IndAS_t * BPS_{it} + \beta_6 BVPS_{it} * MPS_{it} + \beta_7 IndAS_t * BVPS_{it} * \varepsilon_{it} * MPS_{it} + \varepsilon_{it} + Year\ effects + Industry\ effects \quad (6)$$

where MPS_{it} is market price per share of firm i at time t , EPS_{it} is earning per share of firm i at time t , and $BVPS_{it}$ is book value per share of firm i at time t . $IndAS_t =$ a dummy code, 1 for observations in the post-IndAS period and 0 in the pre-IndAS period.

The cross-product term is intended to explain the variation in overall model fit owing to IndAs adoption.

4 Sample and descriptive statistics

We have selected Indian firms from CMIE-Prowess database and have included 222 firms across nine major sectors, given in Table 1, whose complete financial data was available. We have excluded financial companies as discussed in prior studies (Van Tendeloo and Vanstraelen, 2005), because of the basic difference in their financial accounting processes and presentation, in comparison to non-financial firms. Their exclusion from the sample will enhance consistency across the sample and increase comparability of the outcomes.

Table 1 Sample break-up

<i>Panel A: by year</i>					
	2016	2017	2018	2019	Total
Pre-IndAS	222	222			444
Post-IndAS			222	222	444
<i>Panel B: by industry</i>					
S. no.	Name of industry	No of companies	Percent (%)		
1	Capital goods	22	10%		
2	Consumer durable	10	5%		
3	Health	50	23%		
4	Tech	25	11%		
5	Auto sector	15	7%		
6	FMCG	57	26%		
7	Metal	10	5%		
8	Oil gas	10	5%		
9	Telecom	23	10%		
<i>Total</i>		222	<i>100%</i>		

We have considered FY 2016 and 2017 as the pre-IndAS phase and FY 2018 and 2019 as the post-IndAS phase. Thus, the sample size for the study is 888 firm years which was divided equally into 444 firm-years in pre-IndAS sample and 444 firm-years in post-IndAS sample of study.

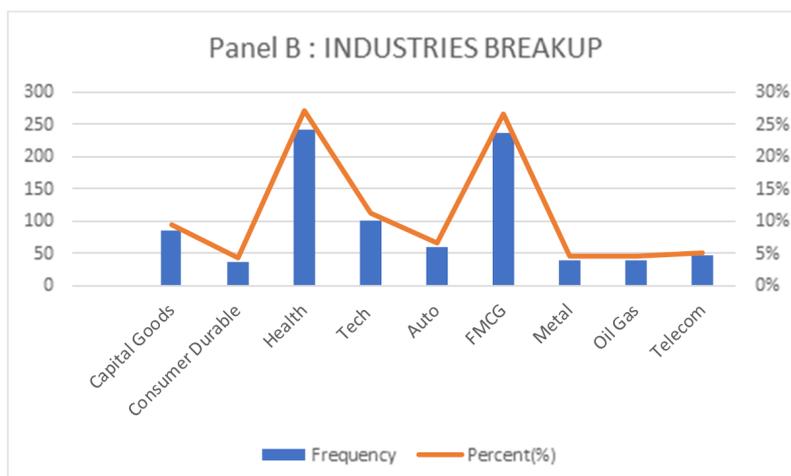
Figure 1 Industry-wise sample break-up (see online version for colours)

Table 2 Descriptive statistics

<i>Panel A: variables for the full sample</i>			
<i>Variables</i>	<i>Mean</i>	<i>Median</i>	<i>SD</i>
<i>ADA</i>	0.13	0.05	0.27
<i>PMADA</i>	0.12	0.04	0.33
<i>SPOS</i>	0.06	0	0.25
<i>Total accrual / TA</i>	0.03	-0.005	0.32
<i>1 / Total assets</i>	8.49	3.18	0.0001
<i>Cash revenue growth</i>	0.06	0.04	0.21
<i>PPE / Total assets</i>	0.36	0.33	0.24
<i>IndAS</i>	0.5	1	0.5
<i>REV / TA(T-1)</i>	23.7	0.87	665.2
<i>CFO / TA(T-1)</i>	4.2	0.09	122.2
<i>ROA</i>	0.55	0.07	12.06
<i>Size</i>	11.1	11.2	1.81
<i>P / B</i>	6.27	3.82	13.7
<i>Age</i>	3.6	3.55	0.55
<i>Leverage</i>	0.46	0.02	5.6
<i>Earnings</i>	1,318.8	2,046.8	39,314.9
<i>IndAS * Earning(T-1)</i>	361.8	0	6,121.8
<i>M Cap</i>	28,789.8	76,835.1	65,701.4
<i>Book value</i>	15,775.2	29,100.3	43,318.3
<i>IndAS * BV</i>	78,409.4	0	31,348.7
<i>BV * Earning</i>	13,685	43,088	1.00E+11
<i>IndAS * BV * Earning</i>	653,619	0	7.17E+10

Note: **and *** denote significance at the level of 1% and 5%, respectively.

Table 2 Descriptive statistics (continued)

<i>Panel B: absolute discretionary accruals</i>									
<i>Variables</i>	<i>Pre-IndAS</i>			<i>Post-IndAS</i>			<i>T stat.</i>	<i>MW test</i>	
	<i>Mean</i>	<i>Median</i>	<i>JB test</i>	<i>Mean</i>	<i>Median</i>	<i>JB test</i>			
Full sample	0.12	0.06	29,074.1***	0.13	0.05	23,263.3**	-0.1	111	
Capital goods	0.04	0.03	22.57***	0.05	0.03	51.97***	-0.85	876	
Consumer durable	0.04	0.03	2.69	0.05	0.04	3.96	-1.01	159	
Health	0.06	0.04	77.55***	0.05	0.04	187.89***	2.18**	110**	
Tech	0.05	0.03	6.28***	0.05	0.04	20.40***	-0.37	1283	
Auto	0.03	0.02	15.28***	0.04	0.03	4.5	-0.98	495	
FMCG	0.32	0.2	1,913.37**	0.34	0.22	1,412.55**	-0.24	7,520	
Metal	0.12	0.07	4.41	0.04	0.02	59.35***	2.37**	295**	
Oil gas	0.02	0.02	2.22	0.01	0.01	2.17	1.82**	144	
Telecom	0.05	0.06	1.58	0.05	0.04	8.07***	0.98	369	

<i>Panel C: performance matched absolute discretionary accruals</i>									
<i>Variables</i>	<i>Pre-IndAS</i>			<i>Post-IndAS</i>			<i>T stat.</i>	<i>MW test</i>	
	<i>Mean</i>	<i>Median</i>	<i>JB test</i>	<i>Mean</i>	<i>Median</i>	<i>JB test</i>			
Full sample	0.12	0.04	371**	0.12	0.04	459**	-0.2	102	
Capital goods	0.04	0.03	14.63**	0.05	0.04	11.36**	-1.2	825	
Consumer durable	0.04	0.04	1.71	0.04	0.03	3.47	-0.5	174	
Health	0.05	0.04	30.7**	0.04	0.02	276.0**	2.90**	877**	
Tech	0.04	0.03	5.55	0.04	0.03	19.6**	0.08	125	
Auto	0.03	0.01	7.77***	0.03	0.03	2.81	-0.78	377	
FMCG	0.3	0.11	621**	0.32	0.13	785.6**	-0.28	651	
Metal	0.12	0.11	15.3**	0.06	0.02	1.95	2.18**	276***	
Oil gas	0.01	0.07	1.72	0.009	0.07	21.3**	1.26	253	
Telecom	0.05	0.06	1.38	0.05	0.05	0.11	0.16	277	

Note: **and *** denote significance at the level of 1% and 5%, respectively.

Panel A, Table 1 gives break-up of the sample between the pre-IndAS phase and the post-IndAS phase. Panel B of Table 1 reflects industry-wise break-up of the 222 firms in the sample of study. Around 26% (57 companies) of total sample are FMCG companies, 23% (50 companies) are from healthcare, 11% (25 companies) are tech companies, while 10% (22 companies) are from capital goods, suggesting that health, FMCG and tech companies overshadow the sample.

Panel A, Table 2 depicts descriptive statistics of all variables used in the study. The mean and median of ADA is 0.13 and 0.05 which shows presence of negative skewness in the ADA distribution pattern. These are greater than the ones registered by Australia and OECD countries (Farooque, 2016). Thus, it can be inferred that most of the companies in India are using lower level of discretion in managing earnings while fewer companies are engaged in high level EM. Similar conclusion can be drawn about PMADA. Only 6% of sample firm-years have small positive earnings. Average total accruals of sample firms are about 3% of total assets. Panel B, Table 2 depicts descriptive statistics of ADA for pre and post-IndAS periods. For full sample, not much change in the average figures of ADA is visible. Industry wise average ADA reveal statistically significant decline in post-IndAS period for health and metal industries. Oil and gas and telecom industries also show decline in the average figures of ADA, however the same are not statistically significant. Panel C, Table 2 depicts descriptive statistics of PMADA for pre and post-IndAS periods. For full sample, no change in the average figures of PMADA is visible. Industry wise average PMADA reveal statistically significant decline in post-IndAS period for health and metal industries. Capital goods industry show increase in the average figures of PMADA, however the same is not statistically significant.

5 Empirical findings

5.1 Earnings management

Panel A of Table 2 reflects decline in mean and median while there is increase in SD of ADA. The findings are in accordance with Kothari et al. (2005). In Panel B of Table 2, detailed distribution of ADA for full sample in both the periods, pre-IndAS and post-IndAS, is displayed. Mean ADA for the pre-IndAS phase is 0.12 and in the post-IndAS phase it is 0.13, which indicates that there is not much difference in DA after the adoption of IndAS. Also, the t-stat as well as Mann-Whitney stat. are insignificant which indicates insignificant difference in the EM practices of Indian listed companies post-IndAS adoption. However, statistically significant difference in ADA of the pre and post-IndAS phases of two industries, health and metal, is depicted by the results. Mean as well as median of ADA in health as well as metal industry shows a decline after IndAS adoption, which means that the new set of accounting standards have significantly restricted the EM behaviour of managers of healthcare and metal companies. The Jarque-Bera test was used to check the normality of the sample and we found that there are only two industries, i.e., consumer durable and oil and gas, where the sample is normal while sample for all the other industries as well as the pooled sample are non-normal. Panel C of Table 2 portrays the mean and median of PMADA which is the robust measure of DA. Similar conclusions are inferred about EM. Thus, our results do

not give any additional insights on using PMADA, as cited in earlier literature (Kothari et al., 2005; Lee and Vetter, 2015).

Table 3 Results of model (2)

<i>Panel A: results on discretionary accrual</i>						
<i>Variable</i>	<i>Absolute discretionary accrual</i>		<i>Positive discretionary accrual</i>		<i>Negative discretionary accrual</i>	
	<i>Coefficient</i>	<i>t-stat.</i>	<i>Coefficient</i>	<i>t-stat.</i>	<i>Coefficient</i>	<i>t-stat.</i>
Intercept	0.3131	4.25***	-0.1850	-2.3**	0.1813	1.52
<i>IndAS</i>	0.0040	0.23	0.0088	0.55	-0.0049	-0.16
<i>REV / TA(t - 1)</i>	0.0039	1.6#	0.0008	1.99	1.95E-05	0.27
<i>CFO / TA(t - 1)</i>	-0.0534	-3.95***	0.1735	2.55***	-0.0701	-2.38***
<i>ROA</i>	0.3219	12.1***	-0.0245	0.89	0.6294	14.1***
<i>SIZE</i>	-0.0242	-5.09***	0.0020	0.38	0.0019	0.23
<i>P/B</i>	0.0009	1.47	0.0002	0.48	-0.0034	-1.45
<i>AGE</i>	0.0095	0.6	0.0692	4.54***	-0.0421	1.53
<i>Leverage</i>	-0.0001	-0.08	0.0011	1.04	0.0070	0.29
<i>Year dummies</i>	<i>Included</i>		<i>Included</i>		<i>Included</i>	
n	888		509		379	
Adjusted R ²	17%		5%		38%	
<i>Panel B: results on performance-matched discretionary accruals</i>						
<i>Variable</i>	<i>Absolute discretionary accruals</i>		<i>Positive discretionary accruals</i>		<i>Negative discretionary accruals</i>	
	<i>Coefficient</i>	<i>t-stat.</i>	<i>Coefficient</i>	<i>t-stat.</i>	<i>Coefficient</i>	<i>t-stat.</i>
Intercept	0.2899	3.34***	0.3449	2.84***	0.2701	2.10**
<i>IndAS</i>	0.0149	0.74	0.0112	0.42	0.0148	0.50
<i>REV / TA(t - 1)</i>	0.0024	0.82	0.0104	1.57	0.0012	0.38
<i>CFO / TA(t - 1)</i>	-0.0431	2.70***	-0.2256	-1.91**	-0.0216	-1.18
<i>ROA</i>	0.3116	9.94***	0.4910	11.24***	0.1552	3.47***
<i>SIZE</i>	-0.0238	4.24***	-0.0226	2.97***	-0.0252	3.04***
<i>P/B</i>	0.0004	0.55	0.0002	0.35	0.0007	0.41
<i>AGE</i>	0.0119	0.64	-0.01023	-0.45	0.0292	1.15
<i>Leverage</i>	-0.0001	-0.07	-0.0003	0.20	0.0086	-0.28
<i>Year dummies</i>	<i>Included</i>		<i>Included</i>		<i>Included</i>	
n	888		459		429	
Adjusted R ²	18%		24%		18%	

Notes: *** and ** denote significance at the level of 1% and 5%, respectively.

#Denote significance at 10% level.

$$\text{Panel A: } ADA_{it} = \alpha_i + \beta_1 IndAS_t + \beta_2 \frac{Rev_{it}}{TA_{i,t-1}} + \beta_3 \frac{CFO_{it}}{TA_{i,t-1}} + \beta_4 ROA_{it} + \beta_5 Size_{it} + \beta_6 PB_{it} + \beta_7 Age_{it} + \beta_8 Leverage_{it} + \epsilon_{it} .$$

$$\text{Panel B: } PMADA_{it} = \alpha_i + \beta_1 IndAS_t + \beta_2 \frac{Rev_{it}}{TA_{i,t-1}} + \beta_3 \frac{CFO_{it}}{TA_{i,t-1}} + \beta_4 ROA_{it} + \beta_5 Size_{it} + \beta_6 PB_{it} + \beta_7 Age_{it} + \beta_8 Leverage_{it} + \epsilon_{it} .$$

The results of model (2) are shown in Panel A of Table 3. The model was run for three situations: ADA, positive DA (income increasing DA) and negative DA (income decreasing DA). The coefficient for IndAS in all the three situations is insignificant which indicates no change in EM practices of managers in India post-adoption of IndAS. Larger size of the reporting entity is correlated with DA inversely. Bigger the firm size, lower the magnitude of DA. Moreover, more the age of the company, higher is the level of EM in case of firms with income decreasing DA. Older firms tend to decrease their reported earnings via accruals method of earning management. The return on assets is positively linked with magnitude of DA in general and more so, in case of firms indulging into income increasing accruals.

Panel B of Table 3 represents the results of model (2) by running the model for PMADA instead of ADA. In this also, it is observed that IndAS is insignificant for absolute, income increasing, and income decreasing performance-matched DA. Our findings reflect similar relationship amongst size and EM as for ADA, although statistical significance is much higher in all the situations here. Even the impact of ROA on PMADA is of similar order as that on ADA. Additional finding in this case is a strong negative impact of CFO on PMADA. This finding is in accordance with theoretical relationship amongst accruals and cash flow from operations (Dechow and Dichev, 2002). After delving into its intricacies, the same result is found that adoption of IFRS converged IndAS could not restrain EM practices to enhance earning quality.

Table 4 Results of model (3)

<i>Variable</i>	<i>Coefficient</i>	<i>Chi-sq. stat.</i>
Intercept	-3.433	8.52**
<i>IndAS</i>	-0.127	0.21
<i>REV / TA(T-1)</i>	0	0
<i>CFO / TA(T-1)</i>	0	0
<i>ROA</i>	-2.682	9.92**
<i>SIZE</i>	-0.058	0.59
<i>P/B</i>	0.007	1.19
<i>AGE</i>	0.467	3.46***
<i>Leverage</i>	0.01	0.21
<i>Year dummies</i>	<i>Included</i>	
n	888	
2 Log L	444.43**	

Note: **and *** denote significance at the level of 1% and 5%, respectively.

$$SPOS_{it} = \alpha_i + \beta_1 IndAS_{it} + \beta_2 \frac{Rev_{it}}{TA_{i,t-1}} + \beta_3 \frac{CFO_{it}}{TA_{i,t-1}} + \beta_4 ROA_{it} + \beta_5 Size_{it} + \beta_6 PB_{it} \\ + \beta_7 Age_{it} + \beta_8 Leverage_{it} + \epsilon_{it} .$$

Table 4 shows the logistic regression findings on small positive earnings, a measure manifesting the degree of manager's EM to keep away from yearly losses. The coefficient for IndAS is negative and insignificant, which clarifies that IFRS converged Indian AS adoption does not refrain managers from manipulating earnings for the purpose of meeting the targets. Firms with negative ROA are less likely to have small

positive earnings. Further, older the firm, more is the likelihood of small positive earnings related EM. Deviance test ($-2LL$) should be used to evaluate goodness-of-fit in logit model when both categorical and continuous covariates are present (Agresti, 2002).

To sum up, all the results reflect no significant change in EM practices of managers post-adoption of IFRS converged IndAS. Hence, it can be concluded that earnings quality, in terms of EM, shows no improvement during post-IndAS period of study.

5.2 Earnings persistence

Table 5, Panel A represents the results on earning persistence. We ran the Hausman test which aided us to choose a fixed effect as the null hypothesis got rejected. The fixed-effect model increases the explanatory power of the variables. Besides, the Wald test significance prompted that variables play a meaningful role in the model. Results reveal that *IndAS* coefficient is significantly positive. Further, it is revealed that the interactive coefficient of *IndAS * earning* is positive and significant, which indicates that IFRS adoption has enhanced earnings quality by way of improving EP.

Table 5 Results of model (4)

<i>Panel A: fixed effect</i>			
<i>Variable</i>	<i>Coefficient</i>	<i>t-stat.</i>	
Intercept	10,371.3	15.72***	
<i>IndAS</i>	2,274.4	1.89**	
<i>Earnings(t - 1)</i>	0.1861	2.27**	
<i>IndAS * Earnings(t - 1)</i>	1.0082	6.46***	
<i>Year dummies</i>		<i>Included</i>	
n		888	
Within R ²		55%	
W		7.7***	
<i>Panel B: GMM model</i>			
<i>Variable</i>	<i>Coefficient</i>	<i>t-stat.</i>	<i>J Stat</i>
<i>IndAS</i>	1,753.5	3.16***	886.4***
<i>Earnings(t - 1)</i>	0.26	10.02***	
<i>IndAS * Earnings(t - 1)</i>	0.94	21.45***	

Notes: ***and ** denote significance at the level of 1% and 5%, respectively.

$$\text{Panel A: } EPS_{it} = \beta_0 + \beta_1 IndAS_t + \beta_2 EPS_{it-1} + \beta_3 IndAS_t * EPS_{it-1} + \text{Year dummies} + \varepsilon_{it}.$$

Further, in Panel B, we ran the same model using GMM which gives deep insight of the variables and increases the explanatory power as J stat. significance is a manifestation. In this, the coefficient for *IndAS * earning* coefficient is positive and significant. Thus, there are companies whose earnings quality has improved after IndAS came into the picture. GMM model is advisable in the situation when one of the independent variables is lag of dependent variable, in order to address the issue of endogeneity. For robustness reasons, this method has been additionally used. The results depict a stronger picture in the same direction.

To conclude, we can say that adoption of IFRS converged IndAS has enhanced EP and thus, improved earnings quality.

5.3 Value relevance

Panel A of Table 6 illustrates the output of VR models. Coefficient of *IndAS * EPS* is negative and insignificant, which may be interpreted as an insignificant impact of adopting IndAS on VR of reported earnings in terms of influence on market prices, although highly significant positive coefficient of EPS indicates strong relevance of reported earnings in general. On the other hand, it is observed that the coefficient of *IndAS * BV* is significantly positive, which is interpreted as augmentation in its VR, which clarifies that changes in financial statements reporting after IndAS adoption has been valued by the investors. Thus, change of BVPS of one unit caused 0.488 times change in MPS, other things remaining constant during post-adoption IndAS phase, as against only 0.162 times change in pre-adoption IndAS period. However, the same cannot be concluded for impact of IndAS reporting on VR of earnings.

Outcome of WLS regression outcome is reported in Table 6, Panel B, which reflects further corroboration of earlier mentioned findings. Likewise, we find similar results. The interaction of IndAS with EPS is not able to bring enhancement in VR, but the interaction of IndAS with BV proves to be meaningful for VR.

Panel C displays nonlinear VR model results. As expected, the coefficient of interactive term *EPS * BVPS* is negative and highly significant, although the coefficient for interactive term *IndAS * EPS * BVPS* is positive. Product model's explanatory shows slight improvement relative to OLS model.

To conclude, the market-based tests reflect enhancement in earnings quality post-adoption of IndAS.

Table 6 Results of models (5) and (6)

<i>Panel A: OLS model</i>		
<i>Variable</i>	<i>Coefficient</i>	<i>t-stat.</i>
Intercept	103,718	5.05***
<i>IndAS</i>	636.9	0.02
<i>EPS</i>	11.36	13.03***
<i>IndAS * EPS</i>	-1.074	-0.97
<i>BV</i>	0.162	2.27**
<i>IndAS * BV</i>	0.326	3.70***
Industry fixed effect	Yes	
Year fixed effect	Yes	
Adjusted R ²	63%	
n	888	

Notes: ***and ** denote significance at the level of 1% and 5%, respectively.

Panel A: $MPS_{it} = \beta_0 + \beta_1 IndAS_{it} + \beta_2 EPS_{it} + \beta_3 IndAS_{it} * EPS_{it} + \beta_4 BVPS_{it} + \beta_5 IndAS_{it} * BVPS_{it} + \varepsilon_{it}$.

#Denote significance at 10% level.

Panel C: $MPS_{it} = \beta_0 + \beta_1 IndAS_{it} + \beta_2 EPS_{it} + \beta_3 IndAS_{it} * EPS_{it} + \beta_4 BVPS_{it} + \beta_5 IndAS_{it} * BVPS_{it} + \beta_6 BVPS_{it} * MPS_{it} + \beta_5 IndAS_{it} * BVPS_{it} * MPS_{it} + \varepsilon_{it}$.

Table 6 Results of models (5) and (6) (continued)

<i>Panel B: WLS model</i>		
<i>Variable</i>	<i>Coefficient</i>	<i>t-stat.</i>
Intercept	74,962.3	5.63***
<i>IndAS</i>	2,524.9	0.135
<i>EPS</i>	6.31	6.96***
<i>IndAS * EPS</i>	-0.24	-0.196
<i>BV</i>	0.741	11.84***
<i>IndAS * BV</i>	0.24	2.39**
Industry fixed effect	Yes	
Year fixed effect	Yes	
Adjusted R ²	26%	
n	888	
<i>Panel C: product model</i>		
<i>Variable</i>	<i>Coefficient</i>	<i>t-stat.</i>
Intercept	78,140.9	3.59***
<i>IndAS</i>	11,557.5	0.37
<i>EPS</i>	12.3891	13.51***
<i>IndAS * EPS</i>	-1.4948	-1.26
<i>BV</i>	0.3729	3.96***
<i>IndAS * BV</i>	0.20354	1.74 [#]
<i>BV * EPS</i>	-1.00E-06	3.41***
<i>IndAS * BV * EPS</i>	9.20E-07	1.84 [#]
Industry fixed effect	Yes	
Year fixed effect	Yes	
Adjusted R ²	64%	
n	888	

Notes: ***and ** denote significance at the level of 1% and 5%, respectively.

Panel A: $MPS_{it} = \beta_0 + \beta_1 IndAS_t + \beta_2 EPS_{it} + \beta_3 IndAS_t * EPS_{it} + \beta_4 BVPS_{it} + \beta_5 IndAS_t * BVPS_{it} + \varepsilon_{it}$.

[#]Denote significance at 10% level.

Panel C: $MPS_{it} = \beta_0 + \beta_1 IndAS_t + \beta_2 EPS_{it} + \beta_3 IndAS_t * EPS_{it} + \beta_4 BVPS_{it} + \beta_5 IndAS_t * BVPS_{it} + \beta_6 BVPS_{it} * MPS_{it} + \beta_7 IndAS_t * BVPS_{it} * MPS_{it} + \varepsilon_{it}$.

6 Conclusions

This study has been done to explore change in quality of financial reporting resulting from compulsory implementation of IFRS converged IndAS by Indian listed companies on 1 April 2017 (excluding financial services companies). In particular, we explore whether financials prepared using IndAS result in less EM, higher EP and increase in VR

of reported financials. The paper details non-specific but fresh testimony surrounding the effect of IndAS on quality of reported financials of Indian listed corporates.

The results indicate some enhancement in financial reporting quality in post-IndAS phase. Particularly, it is found that Indian listed companies show an increase in reported financials quality in market-based models, which is not that clearly indicated by accounting-based models after adoption of IndAS. The study provides evidence of considerable enhancement in financial reporting quality, as suggested by better VR of reported financials post-adoption of IndAS in India. EP also reflects a marked improvement after adoption of IndAS. However, a very critical measure of earnings quality, EM sees no decline post-adoption of IndAS in terms of total sample, although two out of nine industries studied depict improvement in EM. Healthcare and metal industry report significant decline in EM metrics post-adoption of IndAS. EM evaluated by ADA, PMADA, or small positive earnings, did not vary amid the pre and post-IndAS phases.

Our findings boost the ICAI's initiative of converging IndAS to IFRS. These findings shall possibly be informative for accounting standard setters, financial market regulators, and corporate stakeholders of India as well as other countries who are planning to adopt IFRS or to converge their country specific AS to IFRS. The standard setters and regulators in India may make a note of the mixed results and an indication for furthering the efforts to improvise financial reporting quality to get the full benefit of implementing IFRS converged IndAS.

The study has some limitations too which offers scope for furtherance in research in this domain. First, this study is conducted on the basis of a post-IndAS phase which is quite small. Therefore, testing the impact of mandatory IndAS reporting by extending the sample time period at a later date when considerable time has elapsed from the date of adoption of IndAS in India might provide additional and relevant insights. Second, the study uses only three measures of reporting quality: EM, EP and VR. There is a scope to strengthen literature for IndAS by conducting studies including additional facets of earnings quality in literature, such as predictability, timeliness, comparability and verifiability. Third, the study is entirely based on financial data for assessing financial reporting quality. However, apart from financials, companies also report and disclose many other aspects of reporting practices in their quarterly and annual reports. Study of quality of such disclosures in the post-adoption phase might add more value to literature in this context, and also enable regulators and standard setters in charting a roadmap for enhancing reporting quality.

7 Managerial implications

Quality of reported financials is of concern for all corporate stakeholders. Regulators are consistently working in this direction. Securities and Exchange Board of India (SEBI), the Indian capital market regulator, has flagged its concerns relating to EM practices amongst listed Indian corporates. The results indicate mixed findings; only two sectors, healthcare and metal, have shown improvement. In the light of stock market scams such as Satyam, PNB-Nirav Modi, Kingfisher, etc., SEBI has consistently been working in the direction of enhancing investors' confidence in reported financials. The results are expected to be insightful for regulators. Furthermore, the increased VR of reported financials in the post-IndAS period is expected to bring more reliance on reported

financials amongst portfolio managers and investment advisers. The results show greater level of persistence in reported financials y-o-y basis, which is further expected to improve forecasting of financials and assist valuation experts in assessing the company's value more reliably. The results support the decision of regulators of accounting profession (ICAI) in the country since the quality of reported financials have improved on adoption of IndAS. Also, the thrust of IASB to have uniform set of accounting standards across all countries gets an impetus by this research.

References

- Agresti, A. (2002) *Categorical Data Analysis*, 2nd ed., John Wiley & Sons, New Jersey, ISBN: 9780471249689, DOI: 10.1002/0471249688.
- Armstrong, C.S., Barth, M.E., Jagolinzer, A.D. and Riedl, E.J. (2010) 'Market reaction to the adoption of IFRS in Europe', *The Accounting Review*, Vol. 85, No. 1, pp.31–61.
- Ball, R. (2006) 'IFRS: pros and cons for investors', *Accounting & Business Research*, Vol. 36, No. 4, pp.5–27.
- Barth, M.E., Landsman, W.R. and Lang, M. (2008) 'International Accounting Standards and accounting quality', *Journal of Accounting Research*, Vol. 46, No. 3, pp.467–498.
- Bartov, E., Goldberg, S. and Kim, M. (2005) 'Comparative value relevance among German, U.S. and International Accounting Standards: a German stock market perspective', *Journal of Accounting, Auditing and Finance*, Vol. 20, No. 2, pp.95–119.
- Burgstahler, D., Hail, L. and Leuz, C. (2006) 'The importance of reporting incentives: earnings management in European private and public firms', *The Accounting Review*, Vol. 81, No. 5, pp.983–1016.
- Callao, S., Jarne, J.I. and Láinez, J.A. (2007) 'Adoption of IFRS in Spain: effect on the comparability and relevance of financial reporting', *Journal of International Accounting, Auditing and Taxation*, Vol. 16, No. 2, pp.148–178.
- Capkun, V., Jeny, A.C., Jeanjean, T. and Weisss, L.A. (2008) *Earnings Management and Value Relevance During the Mandatory Transition from Local GAAPs to IFRS in Europe*, Working Paper, HEC Paris, ESSEC Business School and Georgetown University.
- Chalmers, K., Clinch, G., Godfrey, J.M. and Wei, Z. (2012) 'Intangible assets, IFRS and analysts' earnings forecasts', *Accounting & Finance*, Vol. 52, pp.691–721, DOI: 10.1111/j.1467-629X.2011.00424.x.
- Chen, H., Tang, Q., Jiang, Y. and Lin, Z. (2010) 'The role of International Financial Reporting Standards in accounting quality: evidence from the European Union', *Journal of International Financial Management & Accounting*, Vol. 21, No. 3, pp.220–278.
- Cho, K., Kwon, K., Yi, H. and Yun, Y. (2015) 'The effect of International Financial Reporting Standards adoption on the relation between earnings quality and information asymmetry in Korea', *Emerging Markets Finance and Trade*, Vol. 51, Sup. 3, pp.95–117, DOI: 10.1080/1540496X.2015.1039905.
- Christensen, H.B., Lee, E. and Walker, M. (2009) 'Do IFRS reconciliations convey information? The effect of debt contracting', *Journal of Accounting Research*, Vol. 47, No. 5, pp.1167–1199.
- Clarkson, P., Hanna, J.D., Richardson, G.D. and Thompson, R. (2011) 'The impact of IFRS adoption on the value relevance of book value and earnings', *Journal of Contemporary Accounting and Economics*, Vol. 7, No. 1, pp.1–17.
- Collins, D. and Hribar, P. (2002) 'Errors in estimating accruals: implications for empirical research', *Journal of Accounting Research*, Vol. 40, pp.105–134, DOI: 10.1111/1475-679X.00041.

- Covrig, V., Defond, M. and Hung, M. (2007) 'Home bias, foreign mutual fund holdings, and the voluntary adoption of International Accounting Standards', *Journal of Accounting Research*, Vol. 45, No. 1, pp.41–70.
- Das, R.C., Mishra, C.S. and Rajib, P. (2018) 'Firm-specific parameters and earnings management: a study in the Indian context', *Global Business Review*, Vol. 19, No. 5, pp.1240–1260 [online] <https://doi.org/10.1177/0972150918788748>.
- Daske, H., Hail, L., Leuz, C. and Verdi, R. (2008) 'Mandatory IFRS reporting around the world: early evidence on the economic consequences', *Journal of Accounting Research*, Vol. 46, No. 5, pp.1085–1142.
- Dechow, P., Ge, W. and Schrand, C. (2010) 'Understanding earnings quality: \$ review of the proxies, their determinants and their consequences', *Journal of Accounting and Economics*, Vol. 50, Nos. 2–3, pp.344–401, [online] <http://doi.org/10.1016/j.jacceco.2010.09.001>.
- Dechow, P.M. and Dichev, I.D. (2002) 'The quality of accruals and earnings: the role of accrual estimation errors', *The Accounting Review*, Vol. 77, pp.35–59.
- Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1995) 'Detecting earnings management', *The Accounting Review*, Vol. 70, No. 28, pp.193–225.
- Dimitropoulos, E.P., Asteriou, D., Kousenidis, D. and Leventis, S. (2013) 'The impact of IFRS on accounting quality: evidence from Greece', *Advances in Accounting*, Vol. 29, No. 1, pp.108–123.
- Ewert, R. and Wagenhofer, A. (2005) 'Economic effects of tightening accounting standards to restrict earnings management', *The Accounting Review*, October, Vol. 80, No. 4, pp.1101–1124 (24pp, <https://www.jstor.org/stable/4093118>).
- Fan, J.P. and Wong, T.J. (2002) 'Corporate ownership structure and the informativeness of accounting earnings in East Asia', *Journal of Accounting and Economics*, Vol. 33, No. 3, pp.401–425, DOI: 10.1016/S0165-4101 (02)00047-2.
- Farooque, O.A. (2016) 'Sustainable financial reporting practice in Australian companies – does quality matter?', *The Journal of Developing Areas*, Vol. 50, No. 6, pp.175–189.
- Festa, G., Rossi, M., Kolte, A. and Marinelli, L. (2020) 'The contribution of intellectual capital to financial stability in Indian pharmaceutical companies', *Journal of Intellectual Capital*, [online] <https://doi.org/10.1108/JIC-03-2020-0091>.
- Francis, J. and Schipper, K. (1999) 'Have financial statements lost their relevance?', *Journal of Accounting Research*, Vol. 37, No. 2, pp.319–352.
- Francis, J., LaFond, R., Olsson, P.M. and Schipper, K. (2004) 'Costs of equity and earnings attributes', *The Accounting Review*, Vol. 79, No. 4, pp.967–1010.
- Gassen, J. and Sellhorn, T. (2006) *Applying IFRS in Germany: Determinants and Consequences*, July, SSRN [online] <https://ssrn.com/abstract=906802>; <http://dx.doi.org/10.2139/ssrn.906802>.
- Ghani, E.K., Santi, M. and Puspitasari, E. (2017) 'Analysis of unconditional conservatism and earnings quality on financial reporting practices in Indonesia upon IFRS convergence', *Management & Accounting Review (MAR)*, Vol. 16, No. 1, pp.75–88, DOI: 10.24191/mar.v16i1.547.
- Grecco, M.C.P. (2013) 'The effect of Brazilian convergence to IFRS on earnings management by listed Brazilian nonfinancial companies', *Brazilian Business Review*, Vol. 10, No. 4, pp.110–132, DOI: 10.15728/bbr.2013.10.4.5.
- Guay, W., Kothari, S. and Watts, R. (1996) 'A market-based evaluation of discretionary accrual models', *Journal of Accounting Research*, Vol. 34, pp.83–105.
- Hodgson, A. and Stevenson-Clarke, P. (2000) 'Accounting variables and stock returns: the impact of leverage', *Pacific Accounting Review*, Vol. 12, No. 2, pp.37–64.
- Houqe, M.N., Monem, R.M., Tareq, M. and Van Zijl, T. (2016) 'Secrecy and the impact of mandatory IFRS adoption on earnings quality in Europe', *Pacific-Basin Finance Journal*, Vol. 40, No. B, pp.476–490.

- Hung, M. and Subramanyam, K.R. (2007) 'Financial statement effects of adopting International Accounting Standards: the case of Germany', *Review of Accounting Studies*, Vol. 12, pp.623–657.
- Jeanjean, T. and Stolowy, H. (2008) 'Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption', *Journal of Accounting and Public Policy*, Vol. 27, No. 6, pp.480–494.
- Jones, J.J. (1991) 'Earnings management during import relief investigations', *Journal of Accounting Research*, Vol. 29, No. 2, pp.193–228.
- Karampinis, N. and Hevas, D.L. (2011) 'Mandating IFRS in an unfavorable environment: the Greek experience', *The International Journal of Accounting*, Vol. 46, No. 3, pp.304–332.
- Klein, A. (2002) 'Audit committee, board of director characteristics, and earnings management', *Journal of Accounting and Economics*, August, Vol. 33, No. 3, pp.375–400, [https://doi.org/10.1016/S0165-4101\(02\)00059-9](https://doi.org/10.1016/S0165-4101(02)00059-9).
- Kothari, S.P., Leone, A.J. and Wasley, C.E. (2005) 'Performance matched discretionary accrual measures', *Journal of Accounting & Economics*, Vol. 39, No. 1, pp.163–197.
- Krishnan, G.V. and Zhang, J. (2019) 'Does mandatory adoption of IFRS enhance earnings quality? Evidence from closer to home', *The International Journal of Accounting*, Vol. 54, No. 1, pp.1950003:1–42 [online] <https://doi.org/10.1142/S1094406019500033>.
- Lang, M., Raedy, J. and Wilson, W. (2006) 'Earnings management and cross listing: are reconciled earnings comparable to U.S. earnings?', *Journal of Accounting and Economics*, Vol. 42, Nos. 1–2, pp.255–283.
- Lee, B. and Vetter, W. (2015) 'Critical evaluation of accrual models in earnings management studies', *Journal of Accounting & Finance*, Vol. 15, No. 1, pp.62–71.
- Li, S. (2010) 'Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital?', *The Accounting Review*, Vol. 85, No. 2, pp.607–636 [online] <http://www.jstor.org/stable/20744143> (accessed 10 June 2020).
- Liu, C., Yao, L.J., Hu, N. and Liu, L. (2011) 'The Impact of IFRS on accounting quality in a regulated market: an empirical study of China', *Journal of Accounting, Auditing & Finance*, Vol. 26, No. 4, pp.659–676 [online] <https://doi.org/10.1177/0148558X11409164>.
- Liu, G. and Sun, J. (2015) 'Did the mandatory adoption of IFRS affect the earnings quality of Canadian firms?', *Accounting Perspectives*, Vol. 14, No. 3, pp.250–275.
- McNichols, M. and Wilson, G.P. (1988) 'Evidence of earnings management from the provisions for bad debts', *Journal of Accounting Research*, Vol. 26, Supplement, pp.1–31.
- Müller, V. (2014) 'The impact of IFRS adoption on the quality of consolidated financial reporting', *Procedia – Social and Behavioral Sciences*, Vol. 109, pp.976–982, DOI; 10.1016/j.sbspro.2013.12.574.
- Munteanu, A., Brad, L., Ciobanu, R. and Dobre, E. (2014) 'The Impact of IFRS adoption in Romania upon the earnings management of the Bucharest Stock Exchange entities', *Procedia Economics and Finance*, Vol. 15, pp.871–876, DOI: 10.1016/S2212-5671(14)00550-4.
- Newman, W., Edmore, T., Milondzo, K. and Ongayi, W.V. (2016) 'A literature review on the impact of IAS/IFRS and regulations on quality of financial reporting', *Risk Governance and Control: Financial Markets & Institutions*, Vol. 6, DOI: 10.22495/rcgv6i4art13.
- Nouri, Y. and Abaoub, E. (2016) 'Company board and earnings quality pre-and-post-IFRS: evidence from France and the UK', *Quarterly Journal of Finance and Accounting*, Vol. 54-4, No. 3, pp.15–64.
- Ohlson, J. (1995) 'Earnings, book values and dividends in security valuation', *Contemporary Accounting Research*, Vol. 11, No. 2, pp.661–687.
- Paananen, M. and Lin, C. (2009) 'The development of accounting quality of IAS and IFRS over time: the case of Germany', *Journal of International Accounting Research*, Vol. 8, No. 1, pp.31–55.

- Rokhmawati, A., Gunardi, A. and Rossi, M. (2017) 'How powerful is your customers' reaction to carbon performance? Linking carbon and firm financial performance', *International Journal of Energy Economics and Policy*, Vol. 7, No. 6, pp.85–95.
- Roychowdhury, S. (2006) 'Earnings management through real activities manipulation', *Journal of Accounting and Economics*, Vol. 42, No. 3, pp.335–370.
- Schipper, K. (1989) 'Commentary on earnings management', *Accounting Horizons*, Vol. 3, No. 3, pp.91–102.
- Shivakumar, L. (2000) 'Do firms mislead investors by overstating earnings before seasoned equity offerings?', *Journal of Accounting and Economics*, Vol. 29, pp.339–371.
- Shu, P-G. and Chiang, S-J. (2014) 'Firm size, timing, and earnings management of seasoned equity offerings', *International Review of Economics and Finance*, Vol. 29, No. C, pp.177–194.
- Sloan, R.G. (1996) 'Do stock prices fully reflect information in accruals and cash flows about future earnings?', *The Accounting Review*, Vol. 71, No. 3, pp.289–315.
- Smith, C. and Watts, R. (1992) 'The investment opportunity set and corporate financing, dividend, and compensation policies', *Journal of Financial Economics*, Vol. 32, No. 3, pp.263–292.
- Van Tendeloo, B. and Vanstraelen, A. (2005) 'Earnings management under German GAAP versus IFRS', *European Accounting Review*, Vol. 14, No. 1, pp.155–180.
- Wang, Y. and Campbell, M. (2012) 'Earnings management comparison: IFRS vs China GAAP', *International Management Review*, Vol. 8, No. 1, pp.5–11.
- White, H. (1980) 'A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity', *Econometrics*, Vol. 48, No. 4, pp.817–838.
- Yuan, J. and Jaing, Y. (2008) 'Accounting information quality, free cash flow and overinvestment: a Chinese study', *The Business Review*, Vol. 11, No. 1, pp.159–166.
- Zeghal, D., Chtourou, S. and Sellami, Y.M. (2011) 'An analysis of the effect of mandatory adoption of IAS/IFRS on earnings management', *Journal of International Accounting, Auditing and Taxation*, Vol. 20, No. 2, pp.61–72.
- Zeghal, D., Chtourou, S.M. and Fourati, Y.M. (2012) 'The effect of mandatory adoption of IFRS on earnings quality: evidence from the European Union', *Journal of International Accounting Research*, Vol. 11, pp.1–25, DOI: 10.2308/jiar-10221.

Websites

- https://www.ifrs.com/updates/aicpa/ifrs_faq.html#q1 (accessed 9 June 2020).
- <https://resource.cdn.icaai.org/55845indas45234a.pdf> (accessed 9 June 2020).
- <https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/> (accessed 9 June 2020).
- <https://www.iasplus.com/en/resources/ifrsf/governance/ifrsf#link1> (accessed 13 June 2020).
- https://www.fsb.org/2002/10/cos_021001a/#:~:text=Its%20principal%20objectives%20are%3A,based%20upon%20clearly%20articulated%20principles (accessed 9 June 2020).
- <http://www.mca.gov.in/MinistryV2/Stand.html> (accessed 9 June 2020).