

VALUE RELEVANCE OF ACCOUNTING VARIABLES BEFORE AND AFTER Ind AS ADOPTION WITH REFERENCE TO ENERGY SECTOR COMPANIES IN INDIA

Dr. T.A. TAMILSELVI

(Assistant Professor)

Quaide Milleth College for Men,

Medavakkam, Chennai.

tatamilselvi@gmail.com

G. Nandini

Ph.D. Research scholar,

Sri Ganesh College of Arts & Science

Salem, India

nandinigurumurthy31@gmail.com

Abstract

Institute of Chartered Accountants of India in consultation with Ministry of corporate affairs has issued Ind AS (IFRS converged standards). Therefore, it is necessary to understand the impact of Ind AS adoption in Indian companies on value relevance.

Value relevance researches investigates the relation between the accounting numbers and the market value of the firm. The paper analyses the value relevance concept between the accounting variables like book value per share, earning per share on market price of shares with reference to energy sector companies in India adopting Ind AS. The secondary data collected covers 8 years consisting of 4 years of pre Ind AS (2012-2016) and 4 years of post (2016-20). The price model developed by Ohlson is analysed using regression model for pre and post Ind AS scenario.

The author tested for collinearity and found that there is no multicollinearity with Variance Inflation factor (1.517) for both variables. The regression results prove earnings per share having positive impact on market price in post-Ind AS adoption period and book value found to be insignificant. The adjusted R² shows increase from the pre-Ind AS period 42% to 58% in post-Ind AS period. Overall, study concludes the value relevance has increased after the adoption of Ind AS in the selected companies.

Keywords: Ind AS, value relevance, book value per share, earning per share, market price of shares, Energy Sector Companies

1. INTRODUCTION

The study analyses the impact of Ind AS implementation on the market value of the selected companies. Value relevance researches investigate the relation between the accounting numbers and the market value of the firm. It requires a most empirically tested regression model which is based on a theoretical valuation model. Ohlson price model is one of the most pervasive regression models used in value relevance studies. The study would address to what level Ind AS adoption enhance the value relevance of samples using price model. The price model called as Ohlson model developed by Feltham and Ohlson's (1995) measures the relationship between book value per share, earnings per share and market price. As companies have witnessed earlier with manipulation of accounting data it is very important to use high quality standards to examine value relevant accounting information after the adoption of the standard.

2. LITERATURE REVIEW

[1] Das et al. (2020) studied effect of accounting variables on stock prices for a period of 5 years in Indian BSE listed cement companies. The author used correlation, Hausman test to find fixed or random effect and panel regression to test the variables.

[2] Sharma (2014) examined the causal relationship between book value, earnings and dividends on share price in 20 public sector and 20 private sector companies for 13 years. Data was analysed using correlation, cross sectional analysis, time series, statistical results and the model specifications.

[3] Glezakos et.al (2012) empirically examined the effect of earnings and book value on stock prices for 13 years on 38 companies from Athens Stock exchange. The Ohlson model was used and tested using single and multiple regression and proved the joint explanatory powers of the variables have increased while earnings explanatory power has diminished in interpreting stock price in comparison with book value

3.1 OBJECTIVES OF THE STUDY

The paper aims to find the impact of Ind AS adoption on selected energy sector companies before and after adoption. Therefore, objectives formulated to address the questions are:

- To analyse the value relevance of book value per share on market price after the adoption of Ind AS.
- To examine the value relevance of earnings per share on market price after the adoption of Ind AS

3.2 HYPOTHESIS

The following null hypothesis is formulated based on the objectives:

- H_{01} : Book value per share does not have a significant positive relationship on market price after the adoption of Ind AS.
- H_{02} : Earnings per share does not have a significant positive relationship on market price after the adoption of Ind AS.

3.3 DATA METHODOLOGY

The study is based on secondary data on Indian energy sector companies who have adopted Ind AS in from 2016. The seven companies considered in the analysis of above objectives are Bharat Petroleum Corporation Ltd, GAIL India Ltd, Hindustan Petroleum Corporation Ltd, Indian Oil Corporation Ltd, NTPC Ltd, Oil and Natural Gas Corporation Ltd and Power Grid Corporation of India Ltd. The data from financial statements of selected companies were taken from money control website. The data covers pre Ind AS and Post Ind AS periods from 2012-2016 of 4 years of pre-Ind AS and 2016-2020 of 4 years of Post-Ind AS adoption. The data in pre is prepared as per IGAAP and post is under Ind AS since the timeline for adoption starts from 2016 in phased manner for Indian companies.

This study aims to examine the value relevance of the selected companies under [4] Ohlson Price Model (1995) the effect of BVPS and EPS in the financial statements on market price. As per Ohlson, the key variables used in this model are market price as dependent variable, book value per share and earnings per share as independent variable. The Feltham and Ohlson's (1995) is widely adopted by various researchers in modified ways(Glezakos et.al (2012)

$$MP_t = \beta_0 + \beta_1 BVPS_t + \beta_2 EPS_t + \epsilon_t$$

Where

MP_t :Market price per share at the end of the year t.

β_0 .is the intercept

β_1 and β_2 are the coefficients of independent variables

$BVPS_t$:Book value per share at the end of year t.

EPS_t : Earnings per share at the end of year t.

ϵ_t :Error term

The tools for analysis are descriptive statistics and regression analysis using SPSS version 20.

Table:1 Definition of variables used in the study

Variables	Measurement	Code
Dependent variable		
Market price	It refers to the price of shares.	MPS
Independent variable		
Book value per share	Net assets/number of equity shares outstanding	BVPS
Earnings per share	Profit attributable to equity shareholders/ number of shares outstanding	EPS

4. EMPIRICAL RESULTS AND DISCUSSION

Under this heading the descriptive statistics and regression models are presented for the variables.

Table:2 Descriptive statistics

Variables / N=28	Minimum	Maximum	Mean	Standard deviation
PRE_MPS	52.71	423.05	156.80	79.71
PRE_BVPS	57.03	491.54	244.63	125.11
PRE_EPS	9.32	66.47	25.99	15.91
POST_MPS	69.05	518.70	203.09	119.76
POST_BVPS	95.32	249.97	162.51	45.67
POST_EPS	-0.97	54.05	23.00	13.49

Source: Researcher computed using SPSS version 20

The above tables show the description of variables pre and post Ind AS scenario for the seven energy sector companies. The book value per share shows minimum value of 57.03 and maximum value of 491.54 in pre Ind AS period and the mean and standard deviation as 244.63 and 125.11. In the post Ind AS period the BVPS ranges from 95.32 to 249.97 and the mean and standard deviation are 162.51 and 45.67. In the case of earnings, the minimum value and maximum value are 9.32 and 66.47 in pre Ind AS period while the mean and standard deviation are 25.99 and 15.91. EPS ranges from -0.97 to 54.05 with mean of 23 and standard deviation of 13.49.

4.1 REGRESSION MODEL

Before the price regression model calculation, the variables are tested for collinearity to rule out the problem of multicollinearity in variables.

Table:3 Results Of Collinearity Test

Variables	Standardised coefficients	Sig.	Collinearity statistic	
	Beta		Tolerance	VIF
Constant		0.000		
BVPS	-0.220	0.085	0.659	1.517
EPS	0.776	0.000	0.659	1.517

Source: Researcher computed using SPSS version 20

From the above table 3, the multicollinearity test analysis shows the tolerance level and variation inflation factor (VIF). The limit for VIF are acceptable if the range is between 1 to 10 while in this case the variables are not strongly correlated. The tolerance levels are 0.659 for the same for the variables. Hence, the problem of multicollinearity is ruled out.

Table:4 Regression Output

Variables	Pre-Ind AS (IGAAP)			Post- Ind AS		
	Coeff.	t-stat	Sig.	Coeff.	t-stat	Sig.
Constant	77.501	2.985	0.006	-29.807	-0.539	0.595
BVPS	-0.128	-0.660	0.515	0.252	1.688	0.104
EPS	0.763	3.921	0.001*	0.615	4.123	0.000*
Adjusted R ²	0.426			0.580		
Durbin-Watson	1.870			1.013		
Prob. (F-stat)	0.000			0.000		

*Significant at 5% level

Source: Researcher computed using SPSS version 20

The Ohlson price regression model is calculated for the variables in the above table 4. The results show coefficient of BVPS is negative in pre-Ind AS period meaning insignificant while EPS with positive coefficient means causes movement in stock price. The P value (t-stat) for BVPS is 0.515 and 0.104 greater than 0.05 at 5% level of significance hence, the null hypothesis is accepted that is book value per share does not have a significant positive relationship on market price after the adoption of Ind AS. The P value (t-stat) for EPS is 0.001 and 0.000 which is lesser than 0.05 hence, the null hypothesis is rejected that is earnings per share has a significant positive relationship on market price after the adoption of Ind AS.

The adjusted R^2 in pre-Ind AS is 42% and in post-Ind AS 58% which increased after the adoption of Ind AS. It is clear that explanatory variables considered in the study like BVPS and EPS reported in post-Ind AS describes more about market price when compared to pre-Ind AS period.

The Durbin-Watson values under pre -Ind is $d=1.870$ and post-Ind AS $d=1.013$ hence, pre-Ind AS value is between the critical values $1.5 < d < 2.5$ which proves no linear auto-correlation. Field (2009) suggest that values under 1 or more than 3 are a definite cause of concern therefore, While in the case of post-Ind AS the value is 1.013 which is greater than 1.

The sig. value of F- stat is 0.000 which lesser than 0.05 hence, the alternate hypothesis is accepted where the variables have increased and are significant in value relevance after the adoption of Ind AS. The findings of similar nature [6] (Erin 2017) proved value relevance of accounting data are more in post-IFRS period. [1] The BVPS and dividend per share have positive relationship while EPS has negative impact on market price. [2] The author found all variables to be significant statistically and value relevance were stronger in private sector when compared to public sector.

CONCLUSIONS

The paper examined the effect of value relevance on market prices of shares in Indian energy sector companies for a period of 4 years pre and 4 years post Ind AS period. The variables like book value per share, earning per share are independent variables and market price as dependent variable. The collinearity test proved no multicollinearity between the variables. The regressions result at 5% level of confidence proves earnings per share has a significant positive relationship on market price after the adoption of Ind AS while book value being insignificant accepting null hypothesis H_{01} . The empirical research conducted with those companies adopting Ind AS in India in energy sector shows the value relevance has increased in the post-Ind AS period for the variables on the market price.

In India, the companies are adopting Ind AS in phased manner based on the turnover from 2016. Therefore, the study is very important to understand the positive impact on value relevance. Though there

are limitations of sample size and one sector only being considered in the study. Each sector the impact on financial parameters vary so generalisation is not possible.

References

- [1] Das, J., Bhattacharjee, A., &Madhukumari. (2020). The Relationship between Stock Prices and Accounting Variables: Evidence Based on BSE Listed Cement Companies. <https://www.researchgate.net/publication/342690079>
- [2]Sharma, M. (2014). Value relevance of accounting information: a comparative study of public and private sectorcompanies in India. *Asia Pacific Journal of Research*, I (XII), 113- 121.
- [3] Glezakos, M., Mylonakis, J., &Kafouros, C. (2012). The impact of accounting informationon stock prices: evidence from the Athens stock exchange. *International Journal of Economics and Finance*, 4 (2), 56-68.
- [4] Feltham, G. & Ohlson, J. (1995). Valuation and clean surplus accounting for operating and financial activities, *Contemporary Accounting Research*, 11(2), 689-731.
- [5]Field, A. (2009) *Discovering Statistics Using SPSS*. 3rd Edition, Sage Publications Ltd., London.
- [6] Erin. O., Olojede. P., &Ogundele. O. (2017). Value Relevance of Accounting Data in the Pre and Post IFRS Era: Evidence from Nigeria. *International Journal of Finance and Accounting*,6(4), 95-103. doi:10.5923/j.ijfa.20170604.01
- [7] www.moneycontrol.com