Relevance of Accounting Information in Value Terms: An Empirical Analysis of a Few Indian Companies

Lekhraj Meena

Assistant Professor, Department of ABST,

University of Rajasthan.

1. Abstract

The current study examines changes over time in the combined, individual, and incremental value relevance of accounting information generated by businesses listed on the S&P BSE-500 during the fiscal years FY-2017 to FY-2021. Results offer convincing proof that accounting information is important for BSE-listed companies. Earnings per share and book value per share, which together represent the combined value relevance of accounting information, have decreased; while there have been negligible changes in the incremental value relevance of accounting information.

Keywords: Value relevance, eps, mpps, eps, bvps.

2. Introduction

The fact that listed companies utilise financial statements as one of their primary means of communication with their shareholders and the general public serves as the impetus for value relevance research. The market often relies on the financial reports issued by these organisations' management. Information provided in financial reports must be credible and relevant in order for them to be successful (Baboukardos Diogenis et al, 2016).Information is deemed trustworthy if it can be relied upon to accurately reflect the transactions or events that it attempts to portray without any excessive inaccuracy or bias. Relevant information impacts users' decisions to make predictions or aids in validating or correcting prior judgements. A valuable piece of information should have both dependability and relevance (Meena Dr Rajesh, 2020).

The market's impression of a company's performance determines how valuable it is, and accounting disclosures give the necessary details to support that perspective. The value relevance of profits per share (EPS), book value of equity per share (BVPS), and cash flows has been the subject of several research. According to these studies, earnings and book values contain a significant amount of information that is useful for valuing a company's stock (Bhatia Meena, 2019). Earnings and book values are seen to be more important for valuing a company than cash flows since cash flows typically have serious matching and timing issues. According to studies, the value relevance of earnings and book values move in opposition to one another, with

a rise in value relevance of book values accompanying a fall in the value relevant of profits (Nijam Habeeb Mohamedet al, 2018).

Academics and practitioners have recently become more interested in research on the value relevance of accounting information, particularly in light of the North American and European banks' reports of the global financial crisis from 2019 to 2020 at the time. The theft at Satyam and other recent scandals in India have also brought attention to the need of accounting information for the Indian capital market. But in India, scholars have mostly concentrated on the value relevance of financial statements, with a concentration on reporting cash flow (Pervan Ivica, et al2014).

3. Literature Review

Baboukardos Diogenis et al, 2016 examined that This portion of literature review has focused on research that have evaluated the value relevance of accounting information. If an accounting statistic significantly and predictably correlates with stock prices or stock market indicators like price-to-earnings or price-to-book ratios, it is said to be value relevant. Meena Dr Rajesh, 2020 studied Earnings per share (EPS) and book value per share (BVPS) are two of the most significant accounting indicators that have a substantial positive correlation with market value of a corporation, as measured by share prices, according to a wide body of study. Nijam Habeeb Mohamedet al, 2018 portrayed that it has been discovered that BVPS has greater incremental explanatory power than EPS. Between 1992 and 1996, the explanatory power of profits and book value for stock prices in China gradually rose. Pervan Ivica, et al2014 studied the correlation between stock price and the accounting data represented by EPS and BVPS in the Chinese stock market between 1991 and 1998. Their findings demonstrated that time-series regression and pooled cross-section regression both indicated that accounting information was value important. Barth M. Landsman et al, 2008 concluded that the empirical association between EPS and BVPS and stock market value using the 1997–2003 data from the Ohlson (1995) model. The findings demonstrated a substantial correlation between EPS, BVPS, and price. Bhattacharjee Animesh, 2020 studied the value relevance of earnings and book values in the Egyptian market from 1998 to 2002 and discovered that, according to both returns and price models, EPS and BVPS were both pertinent and accounted for around 40% of the fluctuation in stock prices. Camodeca Renatoet al,2014 concluded that the value relevance of financial reporting over a 40-year period demonstrates that Norwegian GAAP's value relevance did not decline between 1965 and 2004. Chandra, U. et al, 2008 examined profits' value relevance has fallen but revenues' influence on pricing has not changed, despite the fact that the aggregate value relevance of earnings and revenues has remained constant. Khanna M., 2014 propounded the Tehran Stock Exchange's comparison of book value and dividends vs book value and reported earnings from 1996 to 2004. The findings showed that dividends, book value, and profits had a favourable association with stock market value. M. Jayasree, 2017 did the Vietnamese stock market's value significance of financial statement information. The findings demonstrated that accounting information's value relevance was statistically significant, but considerably less so than in other established and emerging economies. Srinivasan, P. et al, 2010 studied that the required adoption of IFRS in Romania will result in an improvement in the value relevance of earnings after IFRS implementation.

4. Objectives of the Study

1. To assess the value relevance of the earnings and book value representations of accounting information.
2. To investigate how the value and relevancy of accounting information have changed throughout time.

5. Research Methodology

The population for this research is made up of the S&P BSE-500 Index. The research was conducted for the fiscal years beginning on April 1, 2017, and ending on March 31, 2021. Due to their particular industry requirements, businesses in the banking, insurance, and finance sectors as well as central public sector enterprises (CPSEs) were liquidated. Additionally, businesses having financial years ending differently than the fiscal year (April 1 - March 31) of a given year were removed from the research and those with incomplete data for the study period. For the purpose of evaluating the value relevance of accounting information, these sample selection criteria led to a final sample of 200 businesses with 1000 firm-year observations across the five-year research period.

The information needed for the study, which relates to stock prices and financial reporting details, was gathered from the Center for Monitoring the Indian Economy's (CMIE) corporate database (PROWESS), annual reports of the firms, the BSE website, and Moneycontrol. The measuring technique of value relevance has been used to analyse the value relevance of accounting information. This strategy states that the value relevance of financial statements is determined by their capacity to record or summarise the data that has influenced stock price summaries, making them important in the valuation of equity.

In the current study, the value relevance of accounting information was assessed using the Ohlson (1995) Price Valuation Model. With the use of this model, market price per share (MP) may be expressed as a function of both EPS and book value per share (BVPS). To evaluate the value relevance of accounting information, the following Value Relevance Methods have been used:

Methods 1: $MP_{it} = a_0 + a_1\ EPS_{it} + a_2\ BVPS_{it} + k_{it}$

Methods 2: $MP_{it} = b_0 + b_1\ EPS_{it} + k_{it}$

Methods 3: $MP_{it} = c_0 + c_1\ BVPS_{it} + k_{it}$

where:

MP_{it} = Market price per share of firm 'i' in year 't' three months after the balance sheet date

EPS_{it} = Earnings per share based on PAT for firm 'i' in year 't'

$BVPS_{it}$ = Book value of equity per share for firm 'i' in year 't'

e_{it} = Error term for firm 'i' in year 't'

6. Research Hypothesis

The following study hypotheses on the value relevance of accounting information have been developed based on literature review:

Ho1: There is not a confident connection amid market value of a firm represented by share prices and accounting figure represented by EPS and BVPS.

Ha1: There is a confident connection amid market value of a firm represented by share prices and accounting figure represented by EPS and BVPS.

Ho2: Accounting information's incremental and total value significance not varies with time.

Ha2: Accounting information's incremental and total value significance varies with time.

7. Analysis and Results

7.1. Descriptive outlook

In order to evaluate the value relevance hypotheses, descriptive outlooks were created for the sample. Based on the panel cross-sectional times series with the entire sample of 1000 firm-year data for the dependent and independent variables, Table 1 presents a descriptive view. For the relevant variables, the table displays the mean, median, standard deviation, minimum, and maximum values.

Table 1: Descriptive outlook (N = 1000)

Variable	Mean	Median	Std. Dev.	Min.	Max.
BVPS	14.205	9.015	14.011	0.103	92.115
EPS	2.765	1.864	3.991	-5.614	77.015
MP	42.012	22.013	58.204	0.801	586.023

Table-1 shows that MP varied significantly, ranging from 0.801 crore to 586.023 crore with a mean (median) of 42.012 crore (22.013 crore). The table indicates that the mean (median) EPS during the study period is 2.765 (1.864 crore), ranging from a loss of 5.614 crore to 77.015 crore. The mean (median) BVPS is ₹ 14.205 crore (9.015 crore), ranging from 0.103 crore to 93.115 crore. BVPS on average is around seven times more than EPS. The distribution was positively skewed as seen by the fact that the mean values of MP, EPS, and BVPS tended to be greater than their respective medians.

7.2. Correlation Analysis

To assess the degree of link between the variables, the correlation is looked at. Table 2 displays the Pearson and Spearman correlation coefficients for the panel data, respectively, above and below the diagonal.

Table 2: Correlation Analysis (N = 1000)

Variable	BVPS	EPS	MP
BVPS	0.701	0.755	1.000
EPS	0.732	1.000	0.835
MP	1.000	0.810	0.713

Correlation is significant at the 0.01 and significant at the 0.05.

The results of the correlation study confirm that EPS and MP have a significant positive association (0.810). Even though it is less in size than the correlation between EPS and MP, the BVPS and MP relationship is

nonetheless quite robust and favourable (0.713). The Pearson correlation yields findings that are similar. The correlation between EPS and BVPS is likewise very strong.

7.3. Multivariate Analysis

Determine the value significance of accounting information represented by EPS and BVPS, and variations therein over time, are the study's main goals. Value relevance models are established for this purpose using panel and annual cross-sectional regressions. The variations in the combined and incremental value relevance of EPS and BVPS may be examined using yearly cross-sectional regressions. The main metric for evaluating the value relevance of accounting information is adjusted R^2. Additionally, the significant regression coefficients of the independent variables are employed as a measure of the independent variables' individual value importance.

According to prior research, the combined value relevance of accounting information is represented by the Adjusted R2T acquired from Method 1; however, Methods 2 and 3 have been added to assess the individual value relevance of EPS and BVPS, as shown by their separate Adjusted R2s. The combined value relevance of accounting information, known as the Adjusted R2T, has been divided into two components: the incremental explanatory power supplied by EPS, represented by the Adjusted R2EPS, and the incremental explanatory power provided by BVPS, represented by the Adjusted R2BVPS. The Generalized Least Square Random Effect Model's findings for panel and annual cross-section regressions of MP on EPS and BVPS jointly, separately, and incremental value relevance of EPS and BVPS are shown in Table 3.

Table 3: Cross-sectional Panel and Annual Regressions of MP on EPS and BVPS

Year	N	a1	a2	Adj. R^2t (A)	F Statistics (p-value)	b1	Adj. R^2t (B)	c1	Adj. R^2t (C)	Adj. R^2 EPS (A) – (C)	Adj. R^2 BVPS (A) – (B)
2017-18	200	14.312 (4.96)	1.621 (1.29)	0.797	58.60 (0.000)	19.483 (9.75)	0.703	6.606 (10.59)	0.658	0.139	0.094
2018-19	200	6.120 (4.92)	1.293 (3.93)	0.801	62.31 (0.000)	9.366 (10.31)	0.756	3.932 (11.95)	0.726	0.075	0.075
2019-20	200	13.208 (7.15)	0.714 (2.74)	0.798	63.72 (0.000)	15.022 (10.87)	0.764	3.652 (10.65)	0.536	0.262	0.034
2020-21	200	11.102 (5.18)	0.610 (2.01)	0.592	39.91 (0.000)	13.652 (9.56)	0.726	3.368 (10.21)	0.516	0.276	0.016
2021-22	200	3.135 (1.34)	1.025 (3.95)	0.683	31.29 (0.000)	5.126 (3.09)	0.348	2.997 (8.91)	0.541	0.142	0.142
Panel	1000	6.755 (2.81)	2.011 (2.06)	0.495		8.867 (4.26)	0.626	3.426 (11.03)	0.262	0.233	0.262
X^2				128.09 (0.000)			13.65 (0.000)		108.60 (0.000)		

Significant at 10%, 5%, and 1%.

As is seen, EPS and BVPS coefficients are positive and significant at levels better than 5% in every year and 1% in the majority of years. The projected coefficient for BVPS typically rises while the estimated coefficient for EPS generally decreases from one year to the next. As can be observed, EPS response coefficient declines from 14.312 to 6.120 in 2018-19 and BVPS estimated coefficient increases from 1.621to 1.293. Similarly, decline in EPS estimated coefficient from 11.102 to 3.135 in 2021-2022 is set-off by increase in BVPS

estimated coefficient from 0.610 to 1.025. The Adjusted R^2 of the yearly cross-sectional regressions of MP on EPS and BVPS ranged from 0.683 in 2021-2022 to 0.798 in 2008-2009. The Adjusted R^2 of the yearly cross-sectional regressions of MP on EPS ranged from 0.248 in 2010-2011 to 0.604 in 2019-20 while yearly cross-sectional regressions of MP on BVPS ranged from 0.536 in 2019-20 to 0.726 in 2018-2019.

The results based on the pricing model, therefore, substantially confirm Ha1 that there is a positive link between market value of a business represented by share prices and accounting information represented by EPS and BVPS. The findings collected from the developed markets are similarly congruent with the Value Relevance Model 1 results. For instance, EPS and BVPS together accounted 0.470 of the cross-sectional variance in MP in the current study, whereas the standard in the value relevance literature was 0.610. The results, which ranged from 0.502 percent to 0.754, are comparable with the annual cross-sectional regressions of MP on EPS and BVPS in the current study, which range from 0.683 to 0.798.These findings imply that the profits and book values of BSE-listed businesses usually exhibit traits like those of established markets.

The results of the price regressions, in aggregate, offer strong proof that the EPS and BVPS for the sample of BSE-listed businesses reported had a significant impact in equity valuation for the years 2014 through 2021. The findings agree with those of developed capital markets. Contrary to other emerging economies, India's EPS and BVPS are more value relevant, according to the results. The findings given here are also more important than those made by past value relevance studies conducted in India.

7.4 Changes in Accounting Information's Combined and Incremental Value Relevance:

Studies looking at changes in the value relevant of profits and book values have discovered that, over time, the incremental value relevance of EPS has decreased, but that this has been partially compensated by an increased incremental value relevance of BVPS. The total value significance of these two accounting indicators has thus not decreased overall. If there are any notable variations in the combined or relative incremental value significance of EPS and BVPS over time, it is determined in this section. The Value Relevance Model 1's Adjusted R2T and the incremental value relevance of EPS and BVPS (Adjusted R2EPS and Adjusted R2BVPS) were regressed on a time-trend variable (TIME). The change in the combined and incremental value significance of EPS and BVPS has been shown by the significant regression coefficient of the explanatory variable (TIME). If the regression coefficient on TIME turns out to be considerably negative over time, it is predicted that the value significance will have decreased (increased) with time (positive). The results of regressing combined, incremental and bvps on the time trend variable are shown in Table-4.

Adj. R^2T = d0 + d1 (time) + ejt

Adj. R^2EPS = e0 + e1 (time) + ejt

 Adj. R^2BVPS = f0 +f1 (time) + ejt

Table 4: Regression of the Adj. R^2T, Adj. R^2 EPS and Adj. R^2 BVPS on a Time-trend Variable

d0	d1	Adj. R^2	e0	e1	Adj. R^2	f0	f1	Adj. R^2
0.699 (11.97)	-0.062 (-2.32)	0.701	0.283 (3.01)	-0.034 (-0.99)	0.871	0.048 (-0.91)	0.032 (2.05)	0.511

Significant at 10%, 5%, and 1% .

The findings of regressing the combined and incremental EPS and BVPS Adjusted R2 values on a time-trend variable show that the combined R2 value has significantly decreased during the sample period (d1 = -0.062, p 0.10). The incremental value relevance of EPS (e1 = -0.034) and BVPS (f1 = 0.032) during the sample period, however, appear to have decreased and increased, respectively, insignificantly, according to incremental EPS and incremental BVPS's TIME variable coefficients. These findings conflict with earlier study, which found that although book values' incremental value relevance grew, profits' incremental value relevance significantly decreased. The incremental and cumulative value significance of accounting information varies with time, thus these results do not hold Ha2, as a result.

Conclusion

According to predictions, the results of the price regressions show that EPS and BVPS have value relevance for a sample of 1000 firm-year observations for BSE-listed companies from FY 2017 to FY 2021. The outcomes of the combined price regression agree with the conclusions drawn from the advanced markets. The EPS and BVPS of BSE-listed companies also seem to be more value relevant when compared to the findings of other research in India and developing countries. The total value relevance of accounting information has significantly decreased during the sample period. MP is the main dependent variable, while the two main independent accounting measures included in the study are EPS and BVPS. The study might be expanded by undertaking pooled analysis or by adding new independent variables, such as cash flows, dividends, etc., to examine share price variance.

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