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The Evolving Role of Accounting Information: A Comparative Analysis of Pre- and Post- Pandemic Period

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A B S T R A C T

The primary purpose of a company's financial statements is to provide accurate and valuable information to external users, enabling them to make well-informed decisions regarding investments and business transactions with the company. So, this study focuses to analyse the influence of value relevance of accounting information in pre- and post-pandemic period of information technology companies in India. This study investigates how the importance of accounting information for investors in information technology (IT) companies within the Nifty IT Index has changed during the pandemic. The analysis covers two periods: before the pandemic (2018-19 and 2019-20) and after the pandemic (2020-21 and 2021-22). The objective is to understand the changing significance of accounting information due to the pandemic. The analysis involves Pearson's Correlation and Regression Analysis, utilizing Ohlson's (1995) valuation model to evaluate the influence of earnings per share and book value per share on share price. The results indicate a significant shift in accounting information. Prior to the pandemic, book value per share has an influence on share price, but this influence decreased in the post-pandemic period. In contrast, earnings per share has consistently demonstrated a strong positive correlation with share price, with its significance and explanatory power notably increasing during the pandemic. Findings suggest that investors prioritized indicators of profitability and financial performance (captured by earnings per share) over measures of net asset value or equity (represented by book value per share) when making investment decisions during challenging times. In conclusion, the study highlights a change in the importance of accounting information, with a greater emphasis on earnings per share for determining share price during the pandemic.

Keywords: Accounting Information, Book Value, Earnings, Share Price, Value Relevance.

1. Introduction

The primary objective of a company's financial statements is to provide accurate and valuable information to external users, empowering them to make well-informed decisions related to investments and business transactions involving the company. Various external stakeholders, including investors, creditors, clients, and other interested parties, heavily rely on the information presented in these financial statements to evaluate the company's financial standing, future prospects, and overall worth. The information contained in financial statements plays a pivotal role in facilitating the decision-making process of these users.

Accounting information is to be truly beneficial, if it must possess two key qualities: usefulness and reliability. Usefulness implies that the accounting information carries significant relevance, aiding in the decision-making process of external users. Reliability, on the other hand, ensures that the information is trustworthy and can be depended upon for accuracy. When accounting information in financial statements possesses both of these qualities, it is considered “value-relevant”. In other words, it serves as a reliable indicator of a company's market value.

The concept of value-relevance indicates that the information provided in financial statements should have a direct impact on the decision-making process of external users. It goes beyond mere presentation and aims to ensure that the information is not only meaningful but also contributes to an understanding of the company's market value. Investors and other stakeholders are particularly interested in information that can influence their perceptions of a company's performance, future potential, and overall attractiveness as an investment. Conversely, if the information in financial statements is found to be irrelevant to a company's market value, it is termed “non-value-relevant”. In such cases, the data presented may not contribute meaningfully to the decision-making process of external users, potentially diminishing the overall utility of the financial statements. So, the study of value relevance focuses on examining the importance and reliability of accounting information concurrently, representing a significant area of research in the field of accounting.

According to Francis & Schipper, "value relevance" refers to the capacity of financial statement information to effectively capture and summarize the information that ultimately determines the value of a company (Francis & Schipper, 1999). Barth et al. (2001) state that value relevance studies aim to explore the relationship between accounting information and market variables. The framework of the study is presented in Figure 1.

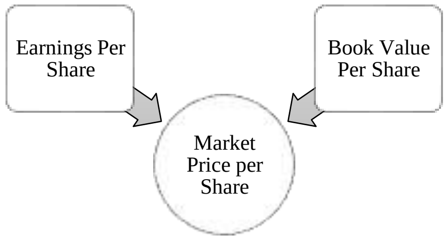

Figure 1: Framework of the study

This research focuses on analyzing the influence of two crucial accounting information such as Earnings Per Share (EPS) and Book Value Per Share (BVPS), on Market Price per Share (MPS) in the context of Indian information technology companies. The study encompasses both the periods before and after the pandemic, seeking to comprehend the impact of these accounting information on the market valuation of information technology firms.

2. Literature Review

Sabo et al. (2023) explored the value relevance of accounting information in Listed Healthcare firms in Nigeria during the COVID-19 pandemic, using the Ohlson (2015) valuation model. Findings indicated that accounting variables, including EPS and Dividend Per Share (DPS), significantly influenced share prices. This highlighted the high relevance of accounting information from healthcare firms for investors in their decision-making processes. **Rao and Ibrahim (2023)** assessed the predictability and value relevance of financial reporting under Indian Accounting Standards (Ind AS) before and after implementation. Using a least square regression model on NSE-listed companies' panel data for the periods 2014-2016 (pre-Ind AS) and 2017-2019 (post-Ind AS). The study found that, in the pre-Ind AS period, variables like BVPS, diluted EPS, and cash flow from operations and investing activities were value relevant. However, during the post-Ind AS period, BVPS and net cash flow from operations lost explanatory power. Comparative analysis revealed higher value relevance of financial statement information in the pre-Ind AS period than the post-Ind AS period. **Rao et al. (2023)** assessed the value relevance of financial information in India before and after the convergence of Ind AS in 2016. Spanning from 2011 to 2022 and divided into pre-Ind AS (2011–2016) and post-Ind AS (2017–2022) periods, the study used the Ohlson pricing model on Nifty 50 Index-listed companies. Findings revealed in pre-Ind AS period, net cash from investing activities, profit-after-tax, and BVPS is relevant for investment decisions. However, in post-Ind AS, profit-after-tax lost explanatory power, while net cash from investing activities and BVPS significantly influenced market prices. The study concluded higher value relevance of accounting statements in the pre-Ind AS period compared to the post-Ind AS period. **Ali (2023)** explored the stock market's deviation from fundamentals during the COVID-19 crisis. By analyzing earnings and returns data from January 1, 2020, across major industrial sectors, the study identified significant variation in the earnings and returns relation. Notably, positive accounting income demonstrated enhanced value relevance, contributing to a shift in the market outlook from negative to positive in late 2020. These findings provided valuable insights for decision-making to investors, creditors, policymakers, analysts, and stakeholders. **Liu and Sun (2022)** explored the effects of the COVID-19 pandemic on earnings management and the importance of earnings in the United States. Examining the situation from an accounting perspective, the study uncovered a significant decline in discretionary accruals from 2019 to 2020, suggesting the use of income-decreasing earnings management strategies amid the pandemic. Furthermore, the results indicated a reduction in both the explanatory power and slope coefficient of earnings in 2020 compared to 2019, indicating a diminished role of earnings in determining firm value due to the pandemic. **Felix (2022)** compared the value relevance of accounting information in Nigerian and South African non-financial firms before and after IFRS adoption. Post-IFRS, BVPS, EPS, and firm size exhibited increased value relevance for share prices in both countries. The study concluded that accounting information had higher value relevance in the post-IFRS periods, particularly in Nigeria, and recommended specific variables for investors to consider when determining share prices in each country. **Pervan and Bartulović (2022)** explored the value relevance of accounting information in the Croatian capital market during 2016-2020, particularly during the COVID-19 crisis. Analyzing book value and earnings in both pre-crisis (105 observations) and crisis periods (70 observations) using Feltham and Ohlson's (1995) model, the study found consistent value relevance. However, the crisis shifted preference towards earnings over book value, as earnings demonstrated greater explanatory power. Combining variables indicated a negative impact on the value relevance of book value and a positive effect on the value relevance of earnings during the crisis. Notably, earnings were statistically significantly correlated with share prices during the crisis, unlike book value. **Sharma and Bora (2022)** explored the consequences of major events, particularly the declaration of COVID-19 as a pandemic by the World Health Organization, on the Indian stock market. Using event study methodology, the study focused on four sectoral and two thematic indices, assessing Average Abnormal Return (AAR) and Cumulative Average Abnormal Return (CAAR) over a period spanning -20 to +20 trading days around the event. Notable findings indicated varied impacts across different sectors, with specific indices like Nifty Pharma and Nifty Energy manifesting distinct patterns. **Otiedhe and Jeroh (2022)** delved into the impact of IFRS adoption on accounting information relevance in the Nigerian industrial sector. Analyzing two periods - 2003-2011 (pre-IFRS) and 2012-2020 (post-IFRS) - the study focused on ten businesses, examining variables like share price, EPS, and BVPS. Findings revealed higher relevance for EPS in the pre-IFRS period, while post-IFRS periods exhibited increased relevance for BVPS. The study concluded that full enhancement of value relevance is yet to be achieved through IFRS implementation, emphasizing the need for strict adherence to IFRS standards to improve financial reporting relevance, especially for stakeholders. **Onyenaju and Ofor (2022)** analyzed the impact of COVID-19 on the value relevance of accounting information in Nigerian healthcare companies, specifically examining the relationship between BVPS and MPS. Findings suggested no post-COVID-19 improvement in MPS, indicating limited positive influence on BVPS in healthcare manufacturing companies. The study recommended prioritizing expense management and innovative cost-cutting strategies for enhanced earnings. **Belesis et al. (2022)** conducted a study on the value relevance of accounting information in 1,645 companies across the top six European economies from 2010 to 2020, using the Ohlson model. The study concluded that explanatory power remained consistent across countries, the COVID-19 pandemic led to decreased financial statement relevance. Notably, in several countries, earnings lost value relevance compared to book value, possibly influenced by the financial crisis. **Rapana (2021)** assessed the impact of comprehensive income and other comprehensive income disclosures on investor decision-making and share prices. The study focused on the value relevance of these accounting measures, considering the pandemic's unique influence on industries. It highlighted the ability of accounting to provide value by connecting market values and accounting book values. The study emphasized understanding how investors interpret other comprehensive income, whether analyzed collectively or individually, and its potential impact on share prices. **Mbekomize and Popo (2020)** investigated the relationship between share price and various accounting information sets, utilizing a six-year dataset (2012-2018) from Botswana Stock Exchange-listed companies. Employing correlation, bivariate, and multivariate regression analyses, the study revealed that EPS held more significance in explaining share prices compared to dividends and book value. Additionally, the research found that book value had the lowest capacity to assess share prices, and operating cash flows were not identified as a significant explanatory factor for the share prices of listed companies on the Botswana stock exchange. **Perveen (2019)** focused on the Pakistani stock market, specifically commercial banks listed on the Karachi Stock Exchange from 2007 to 2012. The study highlighted the reliability of accounting information for decision-makers, especially investors, emphasizing its value in evaluating business performance. Statistical methods such as correlation coefficients and cluster analysis revealed a strong correlation between accounting information and average share prices, with key variables like EPS, firm size, and operational profit identified as crucial and valued by investors.

3. Research Objective

To analyse the influence of value relevance of accounting information in pre- and post- pandemic period of information technology companies in India.

4. Research Methodology

The purpose of this study is to analyse the influence of Earnings Per Share (EPS) and Book Value Per Share (BVPS) on Market Price per Share (MPS) of Information Technology (IT) companies in the Nifty IT index over the period of 2018-19 to 2021-22. The selection of companies is based on their market capitalization as on April 1, 2020 in Nifty IT Index. The researcher focuses on two periods to investigate how the value relevance of accounting information has changed due to the pandemic: a) the pre-pandemic period: 2018-19 and 2019-20, and b) the post-pandemic period: 2020-21 and 2021-22. A specific model has been used to compare the value relevance of accounting information between these periods. Pearson's Correlation and Regression Analysis have been applied to determine the influence of EPS and BVPS on MPS and identify which variable is more closely associated with it. This study has adopted Ohlson's (1995) valuation model, which suggests that companies' value is influenced by both EPS and BVPS. Ohlson (1995) demonstrates that the market value of a firm can be expressed as a linear function of its book value of equity and earnings. The researcher has used Eviews 12 Student Version software to analyse the data and tables have been used for the presentation of data. The variables used in the analysis are as follows:

Table 1- Description of Variables

Dependent Variable		
MPS	Market Price per Share	Natural logarithm value of last day share price of financial year
Independent Variable		
EPS	Earnings Per Share	Net profit available to equity shareholders/Number of outstanding shares
BVPS	Book Value Per Share	Shareholders' Equity/ Number of outstanding shares

5. Research Hypotheses

H_{01}: EPS has no significant influence on MPS in pre- and post- pandemic period of IT companies in India.

H_{02}: BVPS has no significant influence on MPS in pre- and post- pandemic period of IT companies in India.

H_{03}: Accounting information has no significant influence on MPS in pre- and post- pandemic period of IT companies in India.

6. Model Specification

$MPS_{it} = \alpha + \beta_1 EPS_{it} + \varepsilon_{it}$

$MPS_{it} = \alpha + \beta_2 BVPS_{it} + \varepsilon_{it}$

$MPS_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \varepsilon_{it}$

α = Intercept (C)

i = IT Companies

t = Number of years

β_{1-2} = beta coefficient of Independent Variables

ε = Error term

7. Data Analysis and Interpretations

In order to assess the impact of EPS and BVPS on MPS, the study has been employed Pearson's Correlation and Regression Analysis.

Table 2- Results of Correlation Analysis

Pre-Pandemic Period			
	MPS	**EPS**	**BVPS**
MPS	1.0000		
EPS	0.8573	1.0000	
BVPS	0.6594	0.6942	1.0000
Post-Pandemic Period			
	MPS	**EPS**	**BVPS**
MPS	1.0000		
EPS	0.8822	1.0000	
BVPS	0.4346	0.3327	1.0000

Table 2 explains the correlation coefficients between three variables, namely MPS, BVPS, and EPS. The analysis conducted in the study employs Pearson's Correlation to explore the association between these variables. Throughout both periods, EPS indicates a high positive correlation with MPS and also shows the increment of correlation coefficient in the post- pandemic period. Conversely, BVPS demonstrates a moderate correlation with MPS during both periods, although the correlation coefficient decreases in the post-pandemic period.

Table 3- Influence of EPS on MPS

	Pre-Pandemic Period		**Post-Pandemic Period**	
	Coefficients	*P-value*	*Coefficients*	*P-value*
Intercept	5.3129	0.0000	6.1534	0.0000
EPS	0.0279	0.0000	0.0238	0.0000
R Square	0.7350		0.7783	
Adjusted R Square	0.7184		0.7645	

The examination of the significance of EPS in relation to MPS shows a robust positive relationship between EPS and MPS in both the time before and during the pandemic. Interestingly, during the pandemic, the importance of EPS in determining MPS has increased considerably, as evidenced by an adjusted R-squared value of 0.7645. In comparison, the pre-pandemic period has an adjusted R-squared value of 0.7184, indicating a slightly lower association between EPS and MPS.

Table 4- Influence of BVPS on MPS

	Pre-Pandemic Period		**Post-Pandemic Period**	
	Coefficients	*P-value*	*Coefficients*	*P-value*
Intercept	5.2733	0.0000	6.5414	0.0000
BVPS	0.0070	0.0029	0.0040	0.0715
R Square	0.4348		0.1889	
Adjusted R Square	0.3995		0.1382	

When examining separately, BVPS shows a positive and statistically significant influence on MPS in the pre-pandemic period ($p < 0.05$) while insignificant in the post-pandemic period ($p > 0.05$). However, in the post-pandemic period, BVPS does not maintain its statistical significance indicating a decrease in its explanatory power. The explanatory power of BVPS has decreased in the post-pandemic period (from Adj. R Square 0.3995 to Adj. R Square 0.1382).

On the other hand, the importance of EPS increased significantly after the pandemic, with a higher explanatory power than BVPS. This suggests a shift in the information preferences of investors during the pandemic, where they prioritize information from the profit and loss account rather than the balance sheet for selected IT companies.

Table 5- Results of Pre-Pandemic Period

	Coefficients	Standard Error	t Stat	P-value
Intercept	5.1952	0.2705	19.2061	0.0000
EPS	0.0251	0.0059	4.2401	0.0007
BVPS	0.0013	0.0019	0.6820	0.5056
R Square	0.7429	F-Statistics		21.6750
Adjusted R Square	0.7087	Prob.(F-Statistics)		0.0000

The results presented in Table 5 demonstrate the influence of between EPS and BVPS on MPS in pre-pandemic period. The results indicate that EPS has a statistically significant influence on MPS, with p-value 0.0007 ($p < 0.05$). This suggests that EPS has a meaningful influence on determining the MPS. Conversely, the influence of BVPS on MPS is not statistically significant, as indicated by p-value 0.5056 ($p > 0.05$). This implies that BVPS does not have a significant role in determining the MPS in pre- pandemic period.

Table 6- Results of Post-Pandemic Period

	Coefficients	Standard Error	t Stat	P-value
Intercept	5.8951	0.2777	21.2277	0.0000
EPS	0.0224	0.0033	6.7862	0.0000
BVPS	0.0015	0.0011	1.2984	0.2137
R Square	0.8007	F-Statistics		30.1355
Adjusted R Square	0.7741	Prob.(F-Statistics)		0.0000

The results of post- pandemic period presented in Table 6 indicate that EPS has a statistically significant impact on MPS, with p-value 0.0000 ($p < 0.05$). This suggests that EPS has a significant influence on determining the MPS. Conversely, the influence of BVPS on MPS is not statistically significant, as indicated by p-value 0.2137 ($p > 0.05$). This implies that BVPS does not play a significant role in determining the MPS in post- pandemic period.

8. Conclusion

The analysis revealed a significant shift in the importance of accounting information for investors in IT companies during the pandemic. Before the pandemic, individually BVPS had a strong and meaningful relationship with MPS, but this diminished in the post-pandemic period. Conversely, EPS consistently showed a strong positive correlation with MPS, with its significance and explanatory power increasing notably during the pandemic. This suggests that analysis of the influence of EPS and BVPS reveal noteworthy trends. Notably, there is a observed decrease in the explanatory power of BVPS, indicating that its impact on explaining variations in share prices has diminished. Conversely, there is a significant increase in the explanatory power of EPS, suggesting that this accounting information has become more influential in understanding fluctuations in share prices, particularly in the context of the pandemic.

The model employed in the study demonstrates that, when considered together, EPS and BVPS exhibit a substantial influence on share prices, particularly in the post-pandemic period. This implies that, during and after the pandemic, the combination of EPS and BVPS carries significant weight in explaining changes in share prices.

One notable inference from these results is a visible shift in investor preferences. The heightened explanatory power of EPS, relative to BVPS, suggests that investors are placing greater emphasis on earnings-related information rather than book value data, especially in challenging and uncertain economic conditions like those brought about by the pandemic.

This shift could be attributed to investors prioritizing indicators of profitability and financial performance (captured by EPS) over measures of net asset value or equity (represented by BVPS) when making investment decisions. The increased importance of EPS in determining MPS highlights its value relevance and reflects the changing preferences of investors. It reflects a dynamic response to economic uncertainties, where investors may place more trust in indicators that directly speak to a company's ability to generate earnings, navigate challenges, and maintain financial health.

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