ACCOUNTING INFORMATION AND STOCK PRICE OF CONSUMER GOOD COMPANIES LISTED IN VIETNAM STOCK MARKET IN COVID TIME

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\textbf{ABSTRACT}

\textbf{Purpose:} The study's objective is to find more empirical evidence on the relationship between accounting information on financial statements and stock prices of consumer good companies listed on the Vietnamese stock market in Covid time.

\textbf{Theoretical framework:} Follow efficient market theory, in an efficient market, the actual price will immediately reflect new information about the intrinsic value of the firm, based on the idea that stock market prices will reflect public information available on the market (including financial information of enterprises).

\textbf{Design/Methodology/Approach:} The sampling method was used to from 2019 to 2021 (the period when the Vietnamese and world economies were severely affected by the Covid-19 epidemic) through the analysis of OLS, FEM, REM, and GLS models and Stata17 software.

\textbf{Findings:} The results show that DPS and EPS are two of the factors that have the most positive influence on stock prices during this period, while ROE is an indicator that harms companies' stock prices.

\textbf{Research, practical & social implications:} Therefore, future studies regarding sample size and research space can be more extensive. In addition, it is possible to measure accounting information and stock prices by other statistical methods or other indicators to improve further the theoretical framework in the relationship between accounting information and stock price.

\textbf{Originality/Value:} Thereby helping investors, businesses, and policymakers better understand the accounting information's role in the capital market, offering appropriate business and regulatory solutions to improve market efficiency.

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INFORMAÇÃO CONTÁBEIS E PREÇO DAS AÇÕES DE EMPRESAS DE BENS DE CONSUMO LISTADAS NO MERCADO DE AÇÕES DO VIETNÂ EM TEMPO DE COVID

RESUMO
Objetivo: O objetivo do estudo é encontrar mais evidências empíricas sobre a relação entre as informações contábeis nas demonstrações financeiras e os preços das ações de empresas de bens de consumo listadas no mercado de ações vietnamita em tempo de Covid.

Estrutura teórica: De acordo com a teoria do mercado eficiente, em um mercado eficiente, o preço real refletirá imediatamente novas informações sobre o valor intrínseco da empresa, com base na ideia de que os preços do mercado de ações refletirão as informações públicas disponíveis no mercado (incluindo informações financeiras das empresas).

Projeto/Metodologia/Abordagem: O método de amostragem foi usado de 2019 a 2021 (o período em que as economias vietnamita e mundial foram gravemente afetadas pela epidemia de Covid-19) por meio da análise dos modelos OLS, FEM, REM e GLS e do software Stata17.

Conclusões: Os resultados mostram que o DPS e o EPS são dois dos fatores que têm a influência mais positiva sobre os preços das ações durante esse período, enquanto o ROE é um indicador que prejudica os preços das ações das empresas.

Implicações sociais, práticas e de pesquisa: Portanto, estudos futuros com relação ao tamanho da amostra e ao espaço de pesquisa podem ser mais abrangentes. Além disso, é possível medir as informações contábeis e os preços das ações por outros métodos estatísticos ou outros indicadores para melhorar ainda mais a estrutura teórica da relação entre as informações contábeis e o preço das ações.

Originalidade/Valor: Dessa forma, ajuda investidores, empresas e formuladores de políticas a entender melhor o papel das informações contábeis no mercado de capitais, oferecendo soluções comerciais e regulatórias adequadas para melhorar a eficiência do mercado.

INTRODUCTION

The stock price is one of the prominent topics in news channels relating to the market economy in recent times because of the strong volatility of stock prices in the whole market since the Covid-19 outbreak in the world. The Covid-19 pandemic severely disrupts good governance, accountability, and broad participation (Soputan et al., 2023). In fact, the stock market is one of the virtual channels enterprises use to raise capital (Hung et al., 2018). Besides, the legal regulations on the stock market are increasingly improved along with the development of the media, which has attracted significant attention from investors (Idawati & Wahyudi, 2014). Ball and Brown (1968) said that accounting information could affect stock prices, especially accounting information presented in financial statements. Therefore, research topics on the impact of accounting information presented on financial statements on stock prices also receive much attention from researchers when investors often receive the information on financial statements are used as a basis to evaluate the business performance and potential of the enterprise and as a basis for stock valuation and decide to buy, sell or hold shares (Zhu & Niu, 2016).

In Vietnam, the stock market has become increasingly developed and a significant concern for the young generation and researchers. As of 2019, the market capitalization reached approximately 190 billion USD (79.2% of GDP), four times higher than in 2014 (49 billion USD - 31.5% of GDP) (Anh & Gan, 2021). In addition, one of the essential national goals is to increasingly improve the legal framework and promote the stock market from marginal to emerging by 2025 by improving the supervision mechanism and system quality, transparency of financial statements to protect the interests of the parties involved, and attract capital from home and abroad. Therefore, stock prices and topics related to factors affecting stock prices have always received much attention from businesses, investors, and researchers.

Some studies investigate the impact of accounting/financial information on stock prices based on Ohlson’s model (1995) (Dang et al., 2017; Hung, 2018; Zhu & Niu, 2016). However, most results refer to accounting information through different aspects and measures. Furthermore, the relationship between accounting information and stock prices can change over time and space, resulting in different levels of influence according to each period and research context. So, the purpose of this study is to supply empirical evidence of the relationship between accounting information on financial statements and the stock prices of consumer goods companies listed on the Vietnamese stock exchange during the period when Vietnam's economy
Accounting information and stock price of consumer good companies listed in Vietnam stock market in COVID time was affected by the Covid-19 epidemic from 2019-2021 based on commonly used analytical methods for panel data such as OLS, FEM, REM, GLS model.

LITERATURE REVIEW

Accounting - auditing is one of the essential tools of the economy, creating an economic and financial information system for organizations and businesses (Decision No. 480 of the Prime Minister). Accordingly, accounting can be understood as information related to the process of recording, analyzing, and synthesizing financial information arising during the operation of an enterprise and is aggregated on reports for management and control of business activities. Accounting information includes revenue, expenses, profits, assets, liabilities, equity, and financial ratios. (such as financial leverage, current ratio, and profitability ratio) of an enterprise. This information is collected, recorded, analyzed, and aggregated in reports such as income statements, balance sheets, cash flow statements, annual reports, and internal reports. Ministry to monitor business activities of enterprises, make effective management decisions, serve other purposes of enterprises, synthesize and provide necessary financial information in the market.

Some accounting information can effect on stock price, is often mentioned in previous studies (Dang et al., 2017; Hung, 2018; Idawati & Wahyudi, 2014; Ohlson, 1995; Thação, 2020; Zhu & Niu, 2016) among investors. used on the stock market as a basis for stock valuation, such as EPS (basic earnings per share), BVPS (book value per share), DPS (dividend per share) votes), ROE (return on equity), net income, short-term debt ratio, debt-to-assets, and enterprise value-to-sales ratios. Previous studies calculate stock prices by taking the stock market price at the close of the financial year according to Ohlson's (1995) model.

Some previous studies have mentioned several different accounting information that can affect the stock price of enterprises in the world and Vietnam. Thapa (2019) studied the influence of several factors on the stock prices of commercial banks listed on the Nepal Stock Exchange from 2008 to 2018. The results show that EPS and DPS, regulations, market whims, company profile, and luck-based success are factors that have a positive influence on stock prices. On the other hand, interest rates and price-to-earnings ratios harm the stock prices of commercial banks.

Some previous studies based on the research model of Ohlson (1995) found empirical evidence of the positive influence of EPS, BVPS, DPS, and NI on stock prices (Hung, 2018;
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Accounting Information and Stock Price of Consumer Good Companies Listed in Vietnam Stock Market in COVID Time

Therefore, from previous studies, the author proposes the research framework and following hypothesis:

Figure 1: Research Framework

Hypothesis of the Study
H1: EPS has a positive effect on the stock price.
H2: BVPS has a positive effect on the stock price.
H3: DPS has a positive effect on the stock price.
H4: ROE harms stock price.
H5: NI has a positive effect on stock prices.
H6: Current ratio has a positive effect on stock prices.
H7: The enterprise value-to-revenue ratio harms stock prices.

METHODOLOGY

The data collected in the study is panel data from secondary data sources (collected via Finpro software) of 32 consumer goods enterprises listed on the Vietnamese market from 2019 to 2021. The sequence to select the appropriate regression model includes: Perform analysis of Pooled OLS and FEM regression methods. First, use the F test to test hypothesis H0. If H0 is rejected, choose the FEM model; otherwise, choose Pooled OLS. Next, compare the
Pooled OLS and REM models using the Lagrange multiplier method (LM) and the Breusch-Pagan test to verify the appropriateness of the estimate. If the results show Pooled OLS is more suitable than REM and FEM, choose Pooled OLS. If not, continue to the next step. Then, perform an estimation of FEM and REM by the Hausman test. If hypothesis H0 is accepted, choose REM; otherwise, choose FEM. Moreover, continue to test the GLS regression model if there are defects (Gujarati, 2009).

**Measure variables in the model**

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Type</th>
<th>Encode</th>
<th>Measure</th>
<th>Dimension of influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock price</td>
<td>Dependent variable</td>
<td>P3112</td>
<td>Stock price at the end of the year.</td>
<td></td>
</tr>
<tr>
<td>Basic earnings per share</td>
<td>Independent variables</td>
<td>EPS</td>
<td>(Net profit – preferred dividend)/Weighted average number of shares outstanding</td>
<td>+</td>
</tr>
<tr>
<td>Book value per share</td>
<td>Independent variables</td>
<td>BVPS</td>
<td>(Total equity – preferred share capital)/Total outstanding shares</td>
<td>+</td>
</tr>
<tr>
<td>Dividend per share</td>
<td>Independent variables</td>
<td>DPS</td>
<td>Dividend per share</td>
<td>+</td>
</tr>
<tr>
<td>Return on equity</td>
<td>Independent variables</td>
<td>ROE</td>
<td>(Profit after tax / Equity) * 100</td>
<td>-</td>
</tr>
<tr>
<td>Net profit</td>
<td>Independent variables</td>
<td>NI</td>
<td>Total revenue - Total cost</td>
<td>+</td>
</tr>
<tr>
<td>Short-term liquidity index</td>
<td>Independent variables</td>
<td>CurrentRatio</td>
<td>Current assets/ Current Accounts Payable</td>
<td>+</td>
</tr>
<tr>
<td>Enterprise value-to-revenue index</td>
<td>Independent variables</td>
<td>EVSales</td>
<td>Enterprise Value / Revenue</td>
<td>-</td>
</tr>
<tr>
<td>Company size</td>
<td>Control variable</td>
<td>SIZE</td>
<td>Number of company employees</td>
<td>+</td>
</tr>
</tbody>
</table>

Source: Prepared by the authors (2023).

**RESULTS AND DISCUSSION**

**Correlation Analysis**

The correlation coefficients range from -1 to 1, with values closer to -1 or 1 showing a robust linear relationship and values closer to 0 indicating a weak or complete linear relationship.
There is no relationship. A matrix of correlation coefficients of the variables, presented in Table 2, shows that the Pearson correlation coefficient between pairs of variables ranges from -0.195 (BVPS and EVSales) to 0.7344 (between EPS and P3112).

The highest level is 0.7344, which shows a correlation between EPS and P3112. DPS has a strong positive correlation with P3112 (0.6717) and a moderate positive correlation with EPS (0.4286).

In addition, the pairs of independent variables with low correlation coefficients show a good fit when multicollinearity rarely occurs in the research model when the coefficients are all less than 0.8 (Gujarati et al., 2009).

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS</td>
<td>5.47</td>
<td>0.1828</td>
</tr>
<tr>
<td>ROE</td>
<td>3.23</td>
<td>0.3101</td>
</tr>
<tr>
<td>BVPS</td>
<td>3.09</td>
<td>0.3239</td>
</tr>
<tr>
<td>DPS</td>
<td>1.28</td>
<td>0.7825</td>
</tr>
<tr>
<td>NI</td>
<td>1.25</td>
<td>0.7983</td>
</tr>
</tbody>
</table>

Multicollinear Analysis

The study tested the hypothesis that there is no multicollinearity phenomenon by the criteria VIF. The model is not multicollinear if all independent variables have a VIF value of less than 10 (Gujarati et al., 2009).

The results presented in Table 3 show that the VIF values range from 1.25 to 5.47, with the mean VIF value being 2.86. Generally, a VIF value of less than 5 is acceptable, indicating little multicollinearity in the model. The third column of the table shows the inverse of the VIF values, which is another way of interpreting the VIF. A value close to 1 indicates no multicollinearity between the independent variables, while a value close to 0 indicates high multicollinearity.
Mean VIF 2.86
Source: Data from Ho Chi Minh City Stock Exchange, Hanoi Stock Exchange, calculations from Stata 17.

**Analyze and Discuss Research Results**

After collecting data, it will be put into descriptive statistics analysis, correlation test, and multicollinearity test, then select a suitable regression model because the data used in this study will be analyzed panel data. Regression models commonly used to analyze panel data include the Multivariate Pooled OLS regression model, FEM model, REM model, and GLS model... through Stata 17 software. The author will use testing techniques to choose the most suitable model to test the impact of accounting information. To stock prices. The results are presented in Table below:

<table>
<thead>
<tr>
<th></th>
<th>POLS (1)</th>
<th>FEM (2)</th>
<th>REM (3)</th>
<th>GLS (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NI</td>
<td>0.00613***</td>
<td>0.0023</td>
<td>0.00578***</td>
<td>0.00640***</td>
</tr>
<tr>
<td>[8.25]</td>
<td>[1.05]</td>
<td>[5.70]</td>
<td>[15.59]</td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>-425.2***</td>
<td>-130.3</td>
<td>-508.2**</td>
<td>-368.0***</td>
</tr>
<tr>
<td>[-2.21]</td>
<td>[-0.40]</td>
<td>[-2.30]</td>
<td>[-3.51]</td>
<td></td>
</tr>
<tr>
<td>DPS</td>
<td>5.024***</td>
<td>2.976***</td>
<td>4.344***</td>
<td>3.470***</td>
</tr>
<tr>
<td>[8.60]</td>
<td>[5.85]</td>
<td>[9.32]</td>
<td>[5.71]</td>
<td></td>
</tr>
<tr>
<td>BVPS</td>
<td>0.351**</td>
<td>1.226**</td>
<td>0.447**</td>
<td>0.382***</td>
</tr>
<tr>
<td>[2.43]</td>
<td>[2.45]</td>
<td>[2.25]</td>
<td>[3.59]</td>
<td></td>
</tr>
<tr>
<td>EPS</td>
<td>3.081***</td>
<td>-0.86</td>
<td>2.587***</td>
<td>3.433***</td>
</tr>
<tr>
<td>[5.02]</td>
<td>[-0.64]</td>
<td>[3.38]</td>
<td>[4.64]</td>
<td></td>
</tr>
<tr>
<td>_cons</td>
<td>8680.6**</td>
<td>3409.6</td>
<td>10731.3**</td>
<td>6829.9***</td>
</tr>
<tr>
<td>[2.30]</td>
<td>[0.32]</td>
<td>[2.15]</td>
<td>[3.71]</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>R-sq</td>
<td>0.836</td>
<td>0.546</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*t*-statistics in brackets, *p<0.1, **p<0.05, ***p<0.01
Source: Data from Ho Chi Minh City Stock Exchange, Hanoi Stock Exchange, calculations from Stata 17.

Then, to overcome the defects in the model (with autocorrelation and variable variance), the author uses GLS estimation. The results in Table 4 show that five factors, including NI, EPS, BVPS, DPS, and ROE, affect P3112 at a 1% and 5% significance level.

In all models, the variables NI, DPS, BVPS, and EPS are statistically significant predictors of P3112, with different significance levels. In particular, NI, DPS, and EPS have a highly significant positive coefficient in all models (*p<0 ), while BVPS has a moderately significant positive coefficient in models (1), (2), and (4) (**p< 0.05).

The ROE variable is also a significant predictor in the model but harms P3112. The coefficient estimates range from -130.3 to -508.2 and are statistically significant in models (1), (3), and (4) (**p<0.05 and ** p<0.01).
DPS and EPS are the factors that have the most substantial positive influence on stock prices during this period (with β of 5.024 and 3.081, respectively). That is also consistent with previous research results (Hung, 2018; Ta et al., 2020).

Besides, the results show that ROE harms stock price (with β = -425.2), indicating poor management ability of the enterprise during this period and is similar to the results. Previous research (Khanagha, 2011; Thao, 2020).

CONCLUSION AND IMPLICATIONS

Conclusion

Using a quantitative research method, the study investigated the influence of accounting information on the stock prices of 32 consumer good companies listed on the Vietnam stock exchange in 2019-2021. First, the author selected suitable regression models in POLS, FEM, REM, and GLS.

The results show that book value per share, earnings per share, dividend per share, and net profit are factors that have a positive influence on stock prices. On the other hand, dividends per share and earnings per share are the most decisive factors influencing stock prices. Besides, the results also show that return on equity negatively influences stock price during this period.

Implications

From these results, the author has some recommendations as follows:

1. For investors, the results on similarities between consumer goods and other sectors in the relationships between EPS, BVPS, DPS, NI, ROE, and stock price. That means that this is essential information that can affect the share price of companies in the consumer goods industry and other information in the market.

2. For businesses, the results show that EPS, BVPS, DPS, NI, and ROE can all affect the stock prices of companies in consumer goods during the Covid-affected period. From there, they are maybe focusing on promoting production and business activities, developing policies and projects. Research by Al Maani et al. (2023) shows that a large board with a female director and a Corporate Social Responsibility Committee (CSRC) enhances sustainability decision-making, controls management choices, and improves sustainability disclosure.
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REFERENCES


Idawati, W., & Wahyudi, A. (2014). Effect of earning per shares (EPS) and return on assets (ROA) against share price on coal mining company listed in Indonesia stock exchange. SSRN. https://doi.org/https://ssrn.com/abstract=2533815


