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The Effect of COVID 19 on the Performance and Value Relevance of Financial Information of Malaysian Agriculture Firms

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Abstract

This study aims to investigate the impact of COVID-19 on the performance and value relevance of financial information in Malaysian agricultural firms through the lens of Agency Theory. Specifically, it examines how the pandemic has affected the operational performance of agricultural companies and the extent to which it has influenced the value relevance of financial information, including market value, book value, and earnings. The sample consists of 56 listed agricultural firms, with financial data collected from their annual reports covering the period from 2018 to 2021. Utilizing a quantitative approach and regression analysis, the study finds that COVID-19 has had a measurable impact on both firm performance and the value relevance of financial information.

Keywords: COVID 19, Performance, Value Relevance, Agriculture Firms, Malaysia

Introduction

The global COVID-19 pandemic profoundly impacted various industries, including agriculture. In Malaysia, agricultural firms have faced unique challenges due to disruptions in supply chains, labor shortages, and fluctuating market demand. These changes affected both the performance of agricultural firms and the value relevance of their financial information, which is crucial for investors and stakeholders in decision-making processes.

The performance of agricultural firms in Malaysia during the COVID-19 pandemic experienced significant fluctuations due to supply chain disruptions, changes in labor availability, and varying demand for agricultural products. Malaysian agricultural firms, which contribute to the production of commodities like palm oil, rubber, and cocoa, were hit by government-imposed restrictions, including movement control orders (MCOs) to curb the spread of the virus. These measures caused delays in harvesting and processing agricultural products, resulting in lower productivity and increased operational costs (Mottaleb et al., 2020).

Additionally, labor shortages emerged as a critical issue, particularly in plantation sectors like palm oil, where much of the workforce comprises migrant laborers. The imposition of travel bans and strict quarantine measures limited the availability of workers, further reducing output. Studies show that agricultural firms faced reduced revenues due to declining production and the volatile demand in both domestic and international markets (Bakar & Rosbi, 2021).

During the pandemic, Malaysian agricultural firms faced greater pressure to provide relevant financial information due to heightened investor scrutiny. The pandemic led to increased volatility in commodity prices, such as palm oil, which affected profitability. Earnings, one of the primary indicators of financial performance, became less predictable during this period, reducing their value relevance. However, book value gained more prominence, as investors placed greater emphasis on a firm's tangible assets, such as land and machinery, which retained value during periods of reduced earnings (Yusoff et al., 2022).

This study is critical for several reasons. According to Hassan et al (2021), revenues, costs, and general financial stability were all significantly impacted by the major disruptions that COVID-19 generated across industry. Assessing resilience and risk management tactics is made easier by knowing how businesses fared during the pandemic, particularly during difficult times. Unprecedented volatility was brought to the financial markets by the pandemic. Financial data is essential for investors to make well-informed decisions, and studying how the pandemic affected the data's applicability offers insights into investor behavior (Al-Awadi et al, 2020). On top of that COVID-19 has an impact on regulatory and reporting adjustment (Ragab et al., 2021), accounting standards and policy (KPMG, 2020), forecasting and financial planning (Donthu et al., 2020), and understanding sector-specific (Ramelli et al., 2020).

So, the study will be beneficial to investors (Hassan et al., 2021), corporate managers and executives (KPMG, 2020), regulalatory bodies and standard setters (Ragab et al., 2021), auditors and accountant (PwC, 2021), academics and researchers (Donthu et al., 2021), government policymakers (Ramelli et al., 2021), and shareholders and other stakeholders (Al-Awadi et al., 2020). The objectives of the study are to investigate: a) the effect of COVID 19 on agriculture firms' performance, and b) the effect of COVID 19 on value relevance of financial information of Malaysian agriculture firms.

Review of Literature

The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to users in making decisions (IASB, 2018). Financial statements provide relevant information to help the investors to estimate the value of the company. Beisland (2009), defines value relevance as the ability of financial statement information to capture and summarize information that determines the firm's value. In order for accounting information to be relevant, it must be able to influence the economic decisions made by its users. In addition, the accounting information must be of high quality.

The early literature on value relevance highlights that earnings are value relevant (Ball and Brown,1968). Since then, studies on value relevance have expanded over the years and most researchers use the association between accounting information and share price to study the value relevance derived from accounting information. While there have been numerous studies on value relevance on accounting numbers, most of these studies are focused on the developed countries which have a strong and sophisticated capital market such as the United States, United Kingdom and Australia. The studies on the value relevance of accounting information in Malaysia are also inconclusive and insufficient.

Analyzing companies with a financial year ending on 31 March 2020 from 29 countries including Malaysia, Wan Ismail et al (2023), examines the impact of COVID-19 on the value relevance of accounting information, finding a significant decline in the relevance of book value but not earnings. The study reveals that during the pandemic, earnings value relevance exceeded that of book value, suggesting the market focused more on book value due to heightened uncertainty. This shift is linked to agency costs and managerial opportunism, where managers delayed bad news to reduce market volatility and maintain capital flow during the crisis (Jensen & Meckling, 1976). The findings can be explained from the entrenchment perspective, indicating that higher agency costs during the pandemic may have led managers to prioritize their interests, further influencing the value relevance of financial information.

Agency Theory highlights how these dynamics can lead to conflicts of interest between managers and investors or shareholders, particularly during times of uncertainty. Managers may prioritize their own interests, resulting in decisions that impact the perceived value relevance of financial information. For instance, higher agency costs may encourage managers to engage in earnings management to present a more favorable picture of firm performance (Jiraporn et al., 2008). Additionally, the increased focus on short-term stability during crises can result in strategic choices that prioritize personal benefits over shareholder value (Gryglewicz et al., 2020). Moreover, the literature indicates that firms with strong governance mechanisms tend to mitigate the adverse effects of agency costs, ultimately enhancing the reliability of financial reporting (Singh & Rastogi, 2023).

However, in line with this theoretical perspective, the most recent literature posits that value relevance studies should not be based only on a limited number of items, such as earnings and book values. Research should consider a larger number of proxies for external influences, economic conditions, and additional non accounting data to capture overall firm performance (Barth et al., 2023; Dunham & Grandstaff, 2022). Thus, the effect of COVID-19 might bring some impact to the companies' performance. This matter could influence economic decisions by the users. In addition, Migliavacca (2024), suggests that a firm's market value is less reliant on accounting measures, and investors purportedly determine the market prices of shares using different data. This is in line with research conducted by Dunham & Grandstaff (2022), and He, Feng & Hao, (2022). These findings partially collide with those of Barth et al (2023), who maintain that accounting numbers retain value relevance.

Earnings, which traditionally serve as one of the key indicators of firm performance, became less predictable and less relevant during the COVID-19 pandemic. Agricultural firms in Malaysia experienced significant earnings volatility due to the disruptions in production and supply chains. The uncertainty surrounding the pandemic made it difficult for firms to forecast future revenues accurately, reducing the reliability of earnings as an indicator of firm value. Studies by Yusoff et al (2022), suggest that investors placed less emphasis on short-term

earnings during the panCOVIDdemic and instead focused on long-term profitability and sustainability.
Additionally, firms with volatile earnings were perceived as riskier by investors, leading to fluctuations in stock prices. This resulted in lower earnings multiples, making earnings a less reliable measure of value relevance during the pandemic. In contrast, agricultural firms that demonstrated stable or improving profitability, particularly those involved in essential food production, were viewed more favorably by investors. These firms saw relatively higher stock price stability, reflecting the increased value relevance of their financial information (Yusoff et al., 2022).

During the COVID-19 pandemic, the focus on book value as a measure of value relevance increased. Book value represents the net assets of a firm and is considered a more stable measure compared to earnings during times of economic uncertainty. Agricultural firms with substantial tangible assets, such as land, machinery, and equipment, retained higher value relevance in their financial statements. This was particularly important for firms in the palm oil and rubber sectors, where physical assets play a significant role in production capacity (Tan et al., 2021).

The increased emphasis on book value also reflects a shift in investor preferences during the pandemic. As earnings became more unpredictable, investors sought more stable indicators of a firm's underlying value. Firms with strong asset bases were perceived as more resilient and capable of weathering the economic downturn. Moreover, agricultural firms with minimal debt and strong asset positions were better able to secure financing, further enhancing their value relevance (Fatah et al., 2021).

There is some evidence in Europe, United States, Japan and Asian countries on the effect of COVID 19 on companies' performance. Bagão et al (2020), stated that "The fast spread of coronavirus (COVID-19) had negative impacts on financial markets worldwide. It created uncertainty and a lack of confidence, causing unprecedented levels of risk, causing sharp losses to investors in a very short period". Nicholas et al (2022), explores how the pandemic affected the value relevance of financial statements in European markets, with a particular focus on earnings and book value.

Tan et al (2023), concluded that the pandemic has affected the availability and accessibility of agri-food in Malaysia. There is study that found the impacts of COVID-19 pandemic on food systems can be divided between direct impacts of the virus outbreak, and indirect impacts derived from the containment measures (e.g. lockdowns, mobility restrictions, shops closure) at different levels from local to global.

In summary, the literature indicates that COVID-19 pandemic significantly impacts the performance and value relevance of financial information particularly in sectors like agriculture. Studies have shown that market value, book value and earnings have shifted during this period, reflecting the changing priorities of investors and firms. Agency Theory provides valuable insight into the shift in the value relevance of financial information during the pandemic. As investors prioritized book value, cash flows, and asset-based measures over short-term earnings, higher agency costs may have driven managers to adjust financial reporting strategies to preserve firm value and maintain investor confidence.

Research Methodology

This study adopts a quantitative research design to examine the impact of COVID-19 on the performance and value relevance of financial information in Malaysian agricultural firms. The study employs the Ohlson (1995) equity valuation model, a widely accepted framework for assessing the relationship between a firm's accounting information such as earnings and book value and its market value.

The Ohlson (1995) model is as follows:

$$MV_t = \alpha + \beta_1 BV_t + \beta_2 E_t + £$$

Where, MV_t is market value of equity at year t, BV_t is book value of equity at year t, E_t is earnings at year t, £ is error, α is the intercept (constant), β_1 is the coefficient of book value and β_2 is coefficient for earnings.

The sample consists of 56 publicly listed Malaysian agricultural firms. These firms were selected based on the availability of financial data for the years 2018 to 2021, covering both the pre-COVID-19 (2018-2019) and COVID-19 (2020-2021) periods. Financial data were extracted from each company's annual reports, which are publicly available on corporate websites and databases such as DataStream. The study focuses on key financial information including earnings, book value, and market value, which are critical components in evaluating firm performance and value relevance.

Analysis of Findings

Financial performance

Table 1

Financial performance by year in (RM Million)

Mean	2018 (RM Million)	2019 (RM Million)	2020 (RM Million)	2021 (RM Million)
Market Value	2,770	2,770	2,650	2,540
Book Value	1,940	1,870	1,920	2,130
Earnings	82.6	29.9	89.2	223

Analysis of financial performance shows a stagnant value of mean market value of equity for 2018 and 2019. However, the mean market value of equity dropped to RM2,650 million in 2020 and dropped further to RM2,540 million in 2021.

In terms of book value of equity the mean value for 2018 is RM1,940 million,decreased to RM1,870 million in 2019, increased back to RM1,920 million in 2020 and increased further to RM2,130 million in 2021.

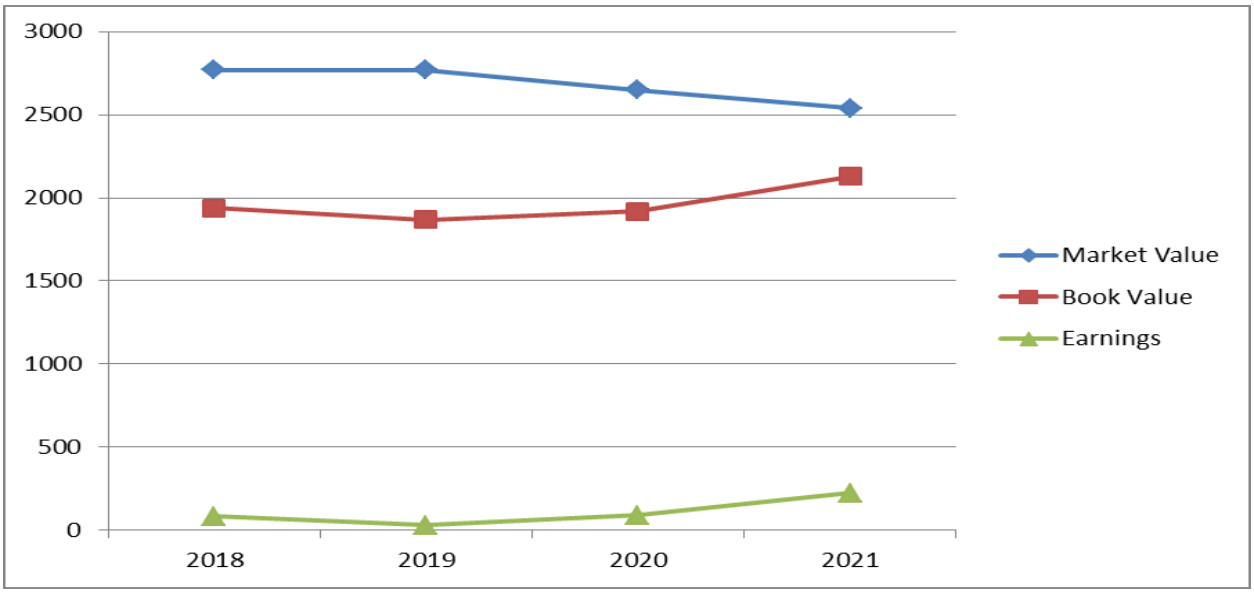
Earnings of the company stood at RM82.6 million in 2018, dropped significantly to RM29.9 million in 2019. Earnings stabilized to RM89.2 million in 2020 before jumping to RM223 million in 2021

Table 1
Descriptive statistics

Mean	2018 (RM)	2019 (RM)	2020 (RM)	2021 (RM)
Market Price	2.8869	2.9162	2.5342	2.6892
Book Value per share	3.3152	3.2896	3.1933	3.6610
Earnings per share	0.9989	0.41041	.10756	.26116

The market price per share of the sector increased to RM2.9162 in 2019 from RM2.8869 in 2018. The market price dropped drastically to RM2.5342. This is believed to be because of the impact of news of COVID in 2020. In 2021 the market price slightly moved up to RM2.6892.

Chart 1: Company performance represented by Market value, Book value and Earnings in Million



The book value per share dropped a bit to RM3.2896 in 2019 as compare to RM3.3152 in 2018. The value slightly dropped again to RM3.1933 in 2020. The book value per share moved up significantly to RM3.6610 in 2021.

Earnings per share was RM0.9989 in 2018. It dropped significantly in 2019 to RM0.4104 per share. The EPS dropped further to RM0.1076 in 2020 and slightly increased to RM.26116 in 2021.

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Empirical Evidence
The effect of COVID-19 (as an event) can be empirically proven by analyzing the data using regression analysis. The analysis is based on a model developed by Ohlson in 1995 - referred to as the Ohlson (1995) model. The model postulates market value of equity can be explained significantly by book value of equity and earnings. Based on previous studies in Malaysia, book value of equity and earning are able to explain the variations in market value of equity during the period of healthy economy.

Table 2
Value relevance of financial information represented by Book value and Earnings

	2018	**2019**	**2020**	**2021**
Constant	-4.32E+08	-8.09E+08	-2.30E+08	8.35E+07
Book value	1.4591*	1.8870*	.54481	.26252
Earnings	4.7139*	.95806	20.5157**	8.4825**
N	54	56	56	56
F value	117.7652*	99.7528*	156.7947*	111.9654*
R^2	0.82201	0.79006	0.88542	0.80862
Adj. R^2	0.81503	0.78214	0.84997	0.80319
* Significant at 5% level				

Based on table 2, book value of equity and earnings are value relevant in 2018. This result indicated that during this period both book value and earnings were able to explain significantly the variations in market value of equity of the agricultural sector. The adjusted R^2 of 0.81503 suggested that book value and earnings can explain 81.5% of the variation in market value of equity. COVID 19 had not started in 2018. Economic and political situation is stable.

In 2019 the explanatory power of book value and earnings towards market value of equity dropped to 78.2%. The regression result for this year showed only book value of equity was value relevant at 5% level. The earnings was not value relevant (not significant) in explaining the variation of market value of equity. Based on the performance of the companies, earnings of 2019 showed a significant drop as compared to earnings of 2018. The reason for the drop in earnings was not specifically known. In the third quarter of 2019, the news about COVID-19 spread all over the world and China is among the countries that first affected by the disease. End of 2019 recorded a few cases of COVID-19 in Malaysia.

In 2020 and 2021 only earnings are value relevant (significant) in explaining the variations in market value of equity at 5% level. The earning for 2020 was reaching back the level of earnings for 2018 whereas earnings for 2021 moved up more than 300% of earnings of 2020. Book value of equity for 2020 and 2021 were not value relevant (not significant) in explaining the variation in market value of equity. One possible reason could be that the book value of equity (which is represented by net assets of the companies) has been impaired but the companies are reluctant to write off the impairment loss because they will affect the current year earnings significantly. If the companies made the adjustment for impairment loss of assets, the results could be different. .

Conclusion and Recommendations

The objectives of the study are to investigate the effect of COVID 19 on performance and value relevance of financial information of agriculture firms in Malaysia. The study utilised Ohlson (1995) model and modified models to address the objectives the study. The study by Tan et al. (2023) mentioned that this outbreak created a reflection of opportunity for sharing a more flexible approaches in handling emergencies on agricultural food production and supply chains.

The agency theory perspective is utilized to examine how the impact of COVID-19 affected the performance and value relevance of financial information in Malaysian agricultural firms, focusing on significant changes between the periods from 2018 to 2021, particularly before and during the pandemic.

The study concluded that the COVID-19 pandemic had a profound impact on the performance and value relevance of financial information of Malaysian agricultural firms. While operational challenges such as supply chain disruptions, labor shortages, and increased production costs negatively affected firm performance, the pandemic also heightened the importance of transparent and reliable financial reporting. The value relevance of financial information shifted, with investors placing greater emphasis on book value, cash flows, and asset-based measures over short-term earnings. As the pandemic continues to evolve, the lessons learned from this period underscore the need for adaptability in financial reporting and the importance of providing stakeholders with relevant and timely information during periods of crisis.

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