

# THE IMPACT OF THE COVID-19 PANDEMIC AND ASSOCIATED RISKS ON THE FINANCIAL PERFORMANCE OF HOTELS

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## Abstract

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The COVID-19 pandemic significantly impacted Thailand's hotel and tourism sectors. This research investigates the impact of the COVID-19 pandemic on the hotel industry in Thailand, focusing on profitability, liquidity, leverage, and operating activities. Data were collected from fourteen hotels listed on the Stock Exchange of Thailand (SET) from 2018 to 2022, yielding a total of 70 firm-year observations. The data were then categorized into two periods (before and during COVID-19). Ten financial ratios of the samples were examined to assess the financial changes during these periods. The study employs an independent sample t-test to assess the changes over time. The results show statistically significant differences in most variables of our study, with only three variables — current ratio (CR), debt-to-equity ratio (DE), and size (total assets — TA) — showing no significant change during COVID-19. Other variables illustrated a drastic decline, with profitability ratios turning negative and other ratios declining post-COVID-19. The results reveal a negative financial impact on the Thai hotel industry caused by the pandemic. Despite challenges, the stability in the financial structure and liquidity of the hotel industry in Thailand remains resilient. It emphasizes the importance of strategic planning, risk management, and the potential role of government support in preparing for future crises.

**Keywords:** COVID-19 Pandemic, Thailand, Financial Performance, Profitability, Hotels

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## 1. INTRODUCTION

The COVID-19 pandemic, which originated in December 2019, has affected over 160 countries

worldwide, and Thailand is no exception. Tourism, a significant contributor to Thailand's economy, accounts for 6% of the gross domestic product (GDP) and generates numerous employment opportunities

(Janjua et al., 2021). The rapid spread of the virus has led to a slower recovery for the tourism sector compared to other sectors (Pongsakornrungrungsilp et al., 2021), impacting the livelihoods of many individuals dependent on the industry. Tourism is a major contributor to Thailand's economy. In 2019, Thailand ranked eighth globally in terms of international tourist arrivals, with China being a major contributor to this market (Saxon et al., 2021). According to "Tourism statistics" (n.d.), the number of foreign visitors arriving in Thailand increased significantly from 13.82 million in 2006 to 39.92 million in 2019. Thailand's tourism sector generated 1.9 trillion in revenue in 2019 from foreign visitors, accounting for 65% of the sector's total earnings, or 11.5% of the country's GDP. However, international travel has drastically decreased as a result of the pandemic and associated limitations. The decline in international travel has had a severe impact on Thailand's tourism sector, leading to a significant decrease in revenue and GDP contribution.

The COVID-19 pandemic has severely impacted China and many other countries worldwide, including Thailand. It had a particularly negative impact on the tourism industry, particularly the hotel industry. The demand for hotel rooms in Thailand has decreased, particularly the overseas visitor market, which has shrunk because of the pandemic situation. Additionally, it has an impact on conference and party venue services' earnings (Dechgitvigrom & Taweewong, 2020; Udomkerdmongkol, 2020). The hotel industry is one of the largest contributors to Thailand's economy. Thai hotel industry challenges, investment, and mergers and acquisitions (M&A) opportunities (Thornhill et al., 2021). Nationwide, during the COVID-19, the average revenue per room decreased by 73.6%. Hotels in Thailand have been addressing challenges by reducing room rates, offering new services, emphasizing domestic tourists, and cutting overheads. Almost one year after the pandemic was incurred, the average occupancy rate fell to 29.3% from 69.7% in 2019 and when compared with the latest information as of January 2021, the occupancy rate was at an average of 70.175%. As the situation started to decline, in January 2021, the occupancy rate of the upper upscale luxury hotels in Thailand was at approximately 80%. Meanwhile, the budget hotels in the country had an occupancy rate at nearly 60% during the same period (Statistic Research Department, 2023).

In the context of the COVID-19 pandemic, the hotel sector's capacity to adjust and bounce back has been significantly impacted by its interaction with a diverse range of stakeholders, as emphasized by stakeholder theory (Barakat & Wada, 2021). This methodology emphasizes the importance of comprehending and prioritizing the requirements and anticipations of vital stakeholders such as staff, clientele, governmental bodies, and local populations. By concentrating on these associations, hotels have been better equipped to maneuver through the difficulties posed by the pandemic (Japutra & Situmorang, 2021), upholding the faith and allegiance that are fundamental for recuperation. Coping strategies to tackle the crisis are vital and need to be in place (Nguyen Duc et al., 2024). Establishments that effectively modified their amenities to align with

shifting customer inclinations, ensured the welfare of their employees and cooperated with authorities on public health endeavors have showcased the pragmatic implementation of Stakeholder Theory in real-time emergency circumstances. Moreover, the hotel industry can effectively tackle and emerge resilient from such unprecedented challenges by employing crisis management theory concurrently with stakeholder theory. The dual application of stakeholder and crisis management theories reveals the correlation between managing stakeholder engagements and addressing crises (Valentinov & Chia, 2022). It demonstrates that the hotel industry's endurance and financial consequences amid the COVID-19 pandemic rely not solely on how it has overseen stakeholder anticipations but also on its ability to adjust to the changing crisis scenario (Matejić et al., 2022). The paper aims to investigate the financial performance changes in the hotel industry during the COVID-19 pandemic.

The rest of this paper is structured as follows. Section 2 reviews the relevant literature. Section 3 describes the methodology used to conduct empirical research. Section 4 presents the empirical findings and related discussions. Finally, Section 5 outlines the conclusion.

## 2. LITERATURE REVIEW AND HYPOTHESES DESIGN

The COVID-19 pandemic drastically affected the global hotel industry, significantly reducing growth, revenue, profitability, and occupancy rates due to extensive travel restrictions and lockdown measures. This impact was especially severe in Thailand (Rukumnuaykit et al., 2022).

The sector of hospitality in Thailand, particularly in prominent locations like Bangkok, Phuket, and Chiang Mai, witnessed rapid expansion driven by growth in both high-end and economical accommodations, propelled by enhanced infrastructure, new tourist attractions, and promotional initiatives such as "Amazing Thailand" (Rukumnuaykit et al., 2022; Vithayaporn, 2021). This development was notably boosted by an increase in Chinese visitors, linked to Thailand's visibility in Chinese media and the availability of more direct flight options (Chen & Kitingern, 2020; Sunthornpan & Hirata, 2021). Nevertheless, the outbreak of the COVID-19 pandemic revealed the sector's susceptibility to global emergencies, leading to a significant impact on hotel revenues due to the cessation of international travel (Klinsrisuk & Pechdin, 2022).

The impact of the pandemic varied, with upscale and corporate hotels facing substantial declines due to their dependence on international tourism, while budget and local hotels were less affected owing to their reliance on domestic clientele (Rogerson et al., 2021). The crisis resulted in widespread job cuts within the industry, with a reported loss of \$4.5 trillion in 2020 (Vithayaporn, 2021). Hotels hastened the integration of technology for their operations and services for guests, incorporating contactless transactions and heightened hygiene protocols, which are anticipated to persist post-pandemic (Marome & Shaw, 2021; Klinsrisuk & Pechdin, 2022). Novel approaches for resilience, such as collaborations for quarantine accommodations or remote workspaces, surfaced as reactions to the pandemic (El-Din & Zaher, 2020).

There were global reductions in hotel occupancy and revenue per available room (RevPAR), severely impacting profitability (Ortega, 2016; Cunill et al., 2024; Rukumnuaykit et al., 2022). Operational changes included workforce reductions and reevaluation of services to minimize losses, with an ongoing exploration of the long-term implications of these adjustments (Klinsrisuk & Pechdin, 2022; Marome & Shaw, 2021). The financial strain on the hotel industry, ranging from decreased tourism enterprises to stressed supply chains, emphasized the need for comprehensive policy interventions to ensure sector sustainability (Kanger et al., 2020).

To bolster the hotel industry during the pandemic, the Thai government, through financial and legislative means introduced measures such as soft loans and financial aid to address cash flow challenges and prevent insolvencies was provided through tax relief initiatives, which involved reduced value-added tax (VAT) rates and postponed tax payments (Sarker, 2020). By promoting domestic tourism through subsidies for accommodations, the “We Travel Together” campaign helped offset the decrease in international visitors (Sunthornpan & Hirata, 2021). Furthermore, regulatory relaxations were implemented to stimulate investments and ease operational limitations, contributing positively to the industry (Marome & Shaw, 2021).

A comparative examination of the financial performance of hotel sectors in Thailand and neighboring countries such as Vietnam, Malaysia, and Indonesia during the pandemic reveals a nuanced landscape of common and distinctive obstacles. Vietnam’s swift recovery driven by domestic tourism contrasts with Thailand’s prolonged difficulties stemming from its heavy reliance on international tourists (Quang et al., 2022). Malaysia’s varied domestic tourism offerings somewhat mitigated the effects of reduced international travel (Shahbaz et al., 2020). Indonesia, notably Bali, suffered major setbacks due to its reliance on foreign visitors, although governmental financial aid provided some relief (Japutra, & Situmorang, 2021). This investigation stresses that the outcome of the pandemic was shaped by variables like government interventions, the structure of the tourism industry, and the proportion between local and international visitors.

Despite the extensive research on the consequences of the pandemic on Thailand’s hotel industry, there are still gaps, particularly in long-term studies on financial viability and recovery trends, as well as the pandemic’s effects on labor dynamics within the hotel sector (Klinsrisuk & Pechdin, 2022). Existing literature frequently neglects aspects like employment policies, employee welfare, and shifts in the labor market. Moreover, while certain studies have addressed the digital revolution in the hospitality industry, further investigation is necessary to comprehend its complete impact on consumer behavior and hotel performance. The psychological impacts of the pandemic on hotel management and staff have also not been thoroughly explored, indicating a necessity for more detailed research on mental health considerations to facilitate effective workforce management and recovery strategies (Vithayaporn, 2021).

The review of the literature provides a comprehensive overview of COVID-19’s multifaceted

impacts on the financial health of Thai hotels, highlighting a severe downturn characterized by plummeting occupancy rates, substantial revenue losses, and operational challenges. The dependency on international tourism, significantly disrupted by travel bans and global health concerns, further intensified these effects (Gössling et al., 2021). In response, hotels adopted innovative strategies, including pivoting towards domestic tourism, digital transformation, and diversifying income sources, which not only offered immediate relief but also set the stage for broader strategic shifts within the industry (Yildiz et al., 2023). Government interventions, such as stimulus packages, financial support, and tax incentives, provided crucial aid, although their effectiveness varied across different segments of the industry, underscoring the need for more targeted and sustained support to bolster resilience (Marome & Shaw, 2021; Thai Ministry of Commerce, 2022). Comparatively, Thailand’s hotel industry faced challenges similar to those in neighboring countries like Vietnam, Malaysia, and Indonesia, with the extent of impact and recovery influenced by each country’s specific governmental actions, market dynamics, and tourism structures (ASEAN Secretariat, n.d.).

Expanding on this identified research gap, the research inquiries are designed to scrutinize the magnitude of the pandemic’s influence on the profitability, liquidity, leverage, and operational ratios of Thai hotels. The examination delves into the impact of the pandemic on these financial indicators, which are vital for the endurance and advancement of the hotel sector. This examination results in the development of hypotheses focused on the correlation between the pandemic and these financial determinants. More precisely, the hypotheses indicate that the COVID-19 pandemic has statistically impacted the profitability (*H1*), liquidity (*H2*), operational ratios (*H3*), leveraging ratio (*H4*), and earnings per share (EPS, *H5*) of hotels in Thailand.

According to Fraser and Ormiston (2016), there are four categories of financial ratios determining the firm’s success which are liquidity ratio as measured by current ratio (CR), leverage ratio as measured by debt-to-equity ratio (DE) and operational ratio as measured by cost-to-income ratio (CIR), gross profit ratio (GPR), operating profit ratio (OPR) and profitability ratio. The profitability of any firm is a key indicator of the firm’s financial health and performance reflecting how well the hotel can generate revenue from its assets, equity and its operations (Rahmi, 2021). The profitability of the firm is measured by return on asset (ROA), return on equity (ROE) and net profit margin (NPM) are considered as important determinants in dictating the financial performances of the hotels as stated by Muhammad and Triharyono (2019). Due to restrictions on economic activities conducted globally, hotels’ ability to provide usual hospitality services and their earnings declined and face higher levels of credit risk of hotels (Ayudhaya, 2019). Several studies (Mohamad Said et al., 2021; Sharma et al., 2021; Temelkov, 2022) in the past also found a significant effect on profitability due to COVID-19. Hence, the first hypothesis is formulated as below:

*H1: The COVID-19 pandemic has a significant effect on the profitability of hotels in Thailand.*

Similar research done by Meeprom and Chancharat (2021) stated that the economic downturn of the country significantly affects the liquidity of the hotels which is determined as measured by the CR of the hotels. Research conducted by Kim et al. (2019) compared the impact of the economic downturn on the financial performances of the hotels before and after the monetary crisis which includes CRs shown to yield mixed results. However, several researchers (Gofran et al., 2023; Wiczorek-Kosmala, 2021) found that COVID-19 had significantly reduced the liquidity of other tourism sectors and companies. The second hypothesis is:

*H2: The COVID-19 pandemic has a significant negative impact on the liquidity of the hotels in Thailand.*

During the COVID-19 pandemic in Thailand, a significant decrease in sales affected adversely the hotels' profitability. The capital worth of the hotels had declined as the decreased sales volume of the hotels in turn affected the profit, ultimately leading to a reduction in cash transactions (Devi et.al, 2020). According to similar research done by Istiningrum (2005), the great economic depression and global crisis have a negative impact on the leverage ratio of the firm. The decline in the capital structure of the hotels results in ineffective and inefficient operational management affecting the overall performance of the hotels in Thailand. The leverage of the hotels is impacted by COVID-19 (Joo & Mir, 2024; Nguyen et al., 2023; Zhang et al., 2022). Hence, we can formulate the third hypothesis as follows:

*H3: The COVID-19 pandemic has affected the leveraging ratio of the hotels in Thailand.*

The COVID-19 pandemic has similarly caused significant disruptions in Hospitality, with widespread economic shutdowns and market volatility specifically in Thailand where the main economic activities of the hotels are dependent on tourism. The significant decline in sales and accommodation abilities of the hotel has negatively affected their earnings in a year (Guo et al., 2022). So, these factors affected the operational ratio (Malikah, 2021) of the hotels as measured by GPR and OPR. The third hypothesis is stated as follows:

*H4: The COVID-19 pandemic has a negative impact on the operational ratio of the hotels in Thailand.*

The government policy of stay-at-home orders reduced the number of people traveling, causing hospitality and tourism stock prices to fall (Carter et al., 2022). From an investor perspective, they would like to see how much they should earn from holding a share of the company of interest. EPS helps the existing shareholders to make decisions on

investing or withdrawing the investment and helps the new investors to evaluate and compare the efficiency and earning capacity of the firms. During COVID-19, the situation would tentatively impact the EPS of the hotel industry (Liew, 2022; Zhang et al., 2022). The following hypothesis is, therefore, developed to assess the effect of the COVID-19 pandemic on the EPS.

*H5: The COVID-19 pandemic has a negative impact on the earnings per share of the hotels in Thailand.*

### 3. RESEARCH METHODOLOGY

This research aims to examine the immediate financial effect of the pandemic on the hotel industry before and during the COVID-19 pandemic. The samples are collected from the year 2018–2022 with data from 14 well-known hotels in Thailand listed on the Stock Exchange of Thailand (SET). The set of data is categorized into two different periods; prior to COVID-19, from 2018 to 2019; and after COVID-19 from 2020–2022. The key financial variables of this study are profitability ratio measured by *ROA*, *ROE*, *NPM*, liquidity ratio measured by *CR*, leverage ratio measured by *DE*, operational ratios measured by *CIR*, *GPR*, and *OPR*, and efficiency ratios measured by *EPS*, while asset size (total assets — *TA*) is our control variable.

In examining the financial performance changes of hotels in Thailand pre- and post-COVID-19, several alternative tests and methodologies can be applied to accommodate diverse data distributions and assumptions. Non-parametric tests like the Mann-Whitney U and Kruskal-Wallis tests are advantageous when data deviates from normality assumptions, effectively evaluating differences between groups without necessitating specific distributional assumptions, making them suitable for ordinal or continuous data. Regression-based analyses and robust regression methods provide resilience to outliers and deviations from normality assumptions. Furthermore, time series analysis can offer temporal trends, particularly pertinent for understanding hotel performance evolution throughout the pandemic. Despite these alternatives, the current study employs the F-test and t-test, at 90% and 95% confidence intervals, due to their widespread use and familiarity (Alcander & Nuraini, 2022; Esomar & Christianity, 2021; Juwari, 2022), facilitating comparison with existing literature and ensuring consistency in statistical analysis approaches. Measurements and descriptions of the variables are presented in Table 1.

**Table 1.** Variables and measurement

Measurement	Variable	Symbol	Equation
Profitability (H1)	Return on asset	ROA	Net profit / Total assets
	Return on equity	ROE	Net profit / Total equity
	Net profit margin	NPM	Net profit / Total revenue
Liquidity (H2)	Current ratio	CR	Current asset / Current asset
Leverage (H3)	Debt equity ratio	DE	Total liabilities / Total equity
	Cost-to-income ratio	CIR	Operating cost / Operating income
Operations (H4)	Gross profit margin	GPR	Gross profit / Revenue * 100
	Operating profit margin	OPR	Operating profit / Revenue * 100
	Earnings per share	EPS	Net profit / Average share
Investor perspective (H5)	Asset size	TA	Natural logarithm of total asset

Source: Authors' elaboration.

## 4. RESULTS AND DISCUSSION

### 4.1. Correlation analysis

The correlation matrix detailed in Table 2 suggests the absence of multicollinearity in the data and the correlations among the variables under the study. The values of their coefficient range from -0.756 to 0.722, indicating that multicollinearity is nonexistent as values are less than 0.70 (Tarurhor, 2023). Table 2, correlation matrix offers valuable insights into the relationships between various financial performance metrics of hotels in Thailand during the COVID-19 pandemic. A strong positive relationship can be observed between *ROA* and *ROE* with a coefficient of 0.722, as well as with *NPM* with a coefficient of 0.708. This correlation is positive

and insignificant. A strong positive correlation suggests that hotels with higher returns on assets tend to have a higher *ROE* and *NPM* and vice versa. This indicates that managing operating costs and maintaining revenue streams were crucial for the profitability of hotels during the pandemic. Another essential correlation is between *DE* and profitability metrics like *ROA*, *ROE*, and *NPM*, with a coefficient of -0.335, -0.756, and -0.115, respectively. The negative correlation of *DE* with *ROA*, *ROE*, and *NPM* suggests that hotels with higher debt levels have faced greater financial strain during the pandemic crisis. This aligns with the previous research findings highlighting the challenges faced by leveraged businesses during economic downturns (Vijayakumaran, 2016) (see Table 2).

**Table 2.** Correlation matrix

	<i>ROA</i>	<i>ROE</i>	<i>NPM</i>	<i>CR</i>	<i>GPR</i>	<i>OPR</i>	<i>DE</i>	<i>EPS</i>	<i>CIR</i>	<i>TA</i>
<i>ROA</i>	1									
<i>ROE</i>	0.722**	1								
<i>NPM</i>	0.708**	0.491**	1							
<i>CR</i>	-0.004	0.112	-0.178	1						
<i>GPR</i>	0.396**	0.342**	0.637**	0.025	1					
<i>OPR</i>	0.486**	0.329**	0.654**	-0.139	0.389**	1				
<i>DE</i>	-0.335**	-0.756**	-0.115	-0.356**	-0.157	-0.092	1			
<i>EPS</i>	0.511**	0.603**	0.332**	0.054	0.274*	0.231	-0.357**	1		
<i>CIR</i>	-0.091	-0.013	-0.282*	0.057	-0.504**	-0.075	-0.031	0.040	1	
<i>TA</i>	-0.011	0.122	0.044	0.070	0.211	0.053	-0.158	0.016	-0.194	1

Note: \*, \*\* correlation value is significant at 5% and 1%, correspondingly.  
Source: Authors' elaboration.

### 4.2. Descriptive statistics

Data from 2018–2022, a five-year period, was used to assess the impact of the COVID-19 epidemic on the financial performance of the selected 14 hotels in Thailand. The data from 2018–2019 is categorized as before COVID-19 and 2020–2022 is during COVID-19. Group statistics are displayed in Table 3, which compares each variable's mean, standard deviation, and standard error mean before and during the COVID-19 pandemic. During the pandemic, profitability decreased, as indicated by *ROA*, *ROE*, and *NPM* measurements. Prior to the pandemic, *ROA* had a mean of 3.864%; after the pandemic, this figure sharply dropped to -3.499%. *ROE* and *NPM* also dropped drastically from 1.21% and 5.213% before the COVID-19 pandemic to -12.126% and -46.504% during the face of COVID-19, respectively. This shows that selected hotels in Thailand were generally in a profitable state before the pandemic. However, there is a downturn in the hotels' ability to generate profit from their assets.

The liquidity and efficiency levels measured by *CR*, *GPR*, and *OPR* dropped significantly during the COVID-19 pandemic. The positive mean value of 2.195% before COVID-19 decreased slightly to 1.658% during the pandemic, which remained above the mean value of 1.5 in both periods indicating that selected fourteen hotels in Thailand generally maintained acceptable short-term liquidity. Meanwhile, *GPR* drastically dropped from 41.408% before the pandemic to 11.166% during the pandemic. Similarly, *OPR* dropped from 6.066% to -39.899% during the COVID-19 pandemic indicating the huge impact of the pandemic on revenue generation, cost control and overall efficiency of the hotels in

Thailand during the COVID-19 period. The results imply that the liquidity position of hotels declined after the outbreak of COVID-19 (Darabee, 2022).

The mean value of *DE* increased slightly from 1.493% to 2.02% during the COVID indicating that the hotels had to take additional debt to support the daily operations during the pandemic. This potentially reflects that the pandemic had an adverse impact on the management of the hotels. A significant increase in *DE* supports the decline in profitability variables despite maintaining adequate liquidity during the pandemic. This finding aligns with the previous studies conducted by Makni (2023) that show that hotels have relied more on debt to finance their assets and operations during the pandemic.

The mean *EPS* decreased from 0.66% before the outbreak of the pandemic to -2.711% during the COVID-19 crisis, signaling that the earnings were highly inconsistent and dropped after the outbreak of the pandemic, with most of the listed hotels facing negative earnings during the pandemic. The *CIR* ratio shows the mean value of 81.392% before COVID-19 increased to 137.654% during the COVID-19 pandemic. The hotels in Thailand were functioning efficiently with a significantly lower *CIR* ratio of 81.392 which proves that they had a healthy financial position before the outbreak of COVID-19. However, a drastic increase in the *CIR* ratio to a mean value of 137.674 poses a great threat to managing cost effectively against income. The COVID-19 outbreak appears to have had an effect on hotels of different sizes, as seen by the log of *TA*, which had a mean of 23.103% prior to the pandemic and significantly fell to 22.957% during the pandemic (see Table 3).

Table 3. Group statistics

Variable	Period*	Mean	Std. deviation	Std. error mean
ROA	Before COVID-19	3.864	5.307	1.003
	During COVID-19	-3.499	4.995	0.771
ROE	Before COVID-19	1.210	28.843	5.451
	During COVID-19	-12.126	13.936	2.150
NPM	Before COVID-19	5.213	10.474	1.979
	During COVID-19	-46.504	63.217	9.755
CR	Before COVID-19	2.195	2.952	0.558
	During COVID-19	1.658	2.768	0.427
DE	Before COVID-19	1.493	2.023	0.382
	During COVID-19	2.020	1.465	0.226
CIR	Before COVID-19	81.392	30.706	5.803
	During COVID-19	137.654	142.598	22.003
GPR	Before COVID-19	41.408	18.888	3.569
	During COVID-19	11.166	55.716	8.597
OPR	Before COVID-19	6.066	21.354	4.036
	During COVID-19	-39.889	107.383	16.570
EPS	Before COVID-19	0.660	5.973	1.129
	During COVID-19	-2.711	8.024	1.238
TA	Before COVID-19	23.103	1.442	0.272
	During COVID-19	22.957	2.192	0.338

Note: The period before COVID-19 refers to 2018-2019; the number of samples was 28. The period during COVID-19 refers to 2020-2022; the number of samples was 42.

Source: Authors' elaboration.

### 4.3. Hypotheses results and discussions

Levene's test for the equality of variances assumption assumes that variances are equal if the significance level is more than 0.05; otherwise, it is believed variances are not equal (Hossain & Rekha, 2022). A significance level of 5% and 10% is used to determine the differences in the performance of a hotel.

ROA, a measure of profitability, yields a p-value of 0.000, which is less than necessary at a significance threshold of 5% and indicates that ROA differs between the pre-pandemic and COVID-19 pandemic periods. The results of Sutrisno et al. (2020), who also discovered a significant p-value indicating the difference in ROE before and during the pandemic, are consistent with the significance value (p-value of 0.012) that ROE yields. There is a significant difference in ROE before and during the COVID-19 pandemic, as indicated by the p-value, which is below the required significance level of 5%. With a p-value of 0.000, below the necessary significance level of 5%, the NPM reveals a difference in ROE between pre- and post-COVID-19. Consequently, there is proof that profitability before and after the pandemic differs dramatically as determined by ROA, ROE, and NPM. Prior to the epidemic, ROA had an average of 3.864%; after the outbreak, this figure dropped to -3.499%. Similarly, profitability as determined by ROE and NPM also decreased; it went from 1.21% and 5.21% before the pandemic to -12.13% and -47.50%, respectively. Since ROE is a company's capacity to generate returns from its own capital (Vale et al., 2022). The distinctions between the two COVID-19 phases make sense given the various COVID-19 restrictions, including the requirement that all hotels close and significant disruptions to their operations. Hence, it supports the hypothesis stating that COVID-19 had a significant negative impact on the profitability (ROA, ROE, and NPM) of the hotels in Thailand.

The CR exhibits a p-value of 0.448, above the 10% level of marginal significance, indicating that there was no change in CR prior to or during the COVID-19 pandemic. These results reflect that the outbreak of the pandemic had no effects

on the liquidity of the hotels as measured by CR. Most of the hotels managed to maintain stable CR even during the pandemic whilst some hotels were affected slightly. The mean of CR before COVID-19 was 2.195% which dropped slightly to 1.658% during the pandemic and the mean value is still positive. The t-test result shows a p-value of 0.448. There were no significant changes in CR before and during the COVID-19 phase. This result fails to reject the null hypothesis ( $H_0$ ) stating that COVID-19 does not have a negative impact on CR of the hotels in Thailand. Meanwhile, DE produces a p-value of 0.211 above a requirement of a significant level up to 5%, reflecting that there is no difference in DE before and during the pandemic. This finding suggests that the listed hotels in Thailand used almost equal debt to finance their assets in relation to equity before and during the COVID-19 pandemic. Therefore, given the result, the  $H_0$  stating COVID-19 had no impact on the liquidity of the hotels in Thailand failed to be rejected.

GPR exhibits a significant p-value of 0.007 which is below the required significant level of 5%. This shows that the pandemic had impacted GPR exhibiting that there is a difference in GPR before the pandemic and during the pandemic phase. Additionally, the OPR indicates a substantial difference in OPR between before and during the COVID-19 pandemic, with a p-value of less than 0.05 and a significant level of 5%. Increases in GPR and OPR will boost efficiency and return, which will boost profitability (Disemadi & Shaleh, 2020). Before the COVID-19 pandemic, the mean GPR and OPR were 41.408% and 6.066%, respectively. During the epidemic, these values dropped sharply to 11.166% and -39.899%, respectively. These results indicate that the selected hotels were not able to control their efficiency and immediately the profitability of the hotels during the COVID-19 period as we can see from the result of profitability indicators (ROA, ROE, and NPM) declined during the COVID-19 pandemic. This outcome also confirms that the profitability of the hotels as measured by ROA, ROE, and NPM has also decreased significantly during the pandemic. Significant decline in GPR and OPR due to the decline in tourist arrival, temporary

closing of international transports and nationwide lockdown in Thailand (Vithayaporn, 2021). So, this supports the hypothesis that COVID-19 had a significant negative impact on the gross profit and operating profit of the hotels in Thailand.

EPS shows a marginally significant effect with a p-value of 0.062 smaller than the required significant level of up to 10%, reflecting that COVID-19 had a negative impact on the EPS. This signifies the existence of differences in EPS of the hotel industry before and during the pandemic. The analysis results marginally support the hypothesis that EPS is negatively affected by the COVID-19 outbreak. The CIR demonstrates a p-value of 0.017 which is significant up to the level of 5% implying that there is a difference in CIR between two phases of COVID-19. CIR increased from 81.392% before COVID-19 to 137.694% indicating a massive increase in cost in relation to income during the COVID-19 pandemic. This result is explanatory as during the pandemic period, hotels in Thailand incurred losses and had to incur expenses on running the hotels as self-isolation places for COVID-19-

infected people in Thailand (Srihawan, 2021). This finding underscores that hotels are not able to control their operational efficiency and failed to manage effective cost management practices during the pandemic. Hence, it supports the hypothesis that COVID-19 has adversely affected the CIR of the hotels in Thailand.

The size of a firm as measured by the log of TA exhibits a p-value of 0.757 more than the required significant level of 5%, determining that the size of the sample hotels does not change statistically during the pandemic. The asset size of the hotels remained the same regardless of the outbreak of the pandemic. The Thai government's policy of investing in upgrades of the hotels despite the fallout from the pandemic, hotels managed to maintain their asset size as before (Pinchuck, 2020). The size as measured by total assets before COVID-19 had a mean of 23.103% and decreased to 22.957% during the COVID-19 pandemic. Therefore, we failed to reject a hypothesis stating that the size of the hotels in Thailand has been affected by COVID-19 (see Table 4).

Table 4. T-test for equality of means

Variables		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
								Lower	Upper	
ROA	Equal variances assumed	0.006	0.939	5.893	68	0.000	7.363	1.249	4.870	9.856
ROE	Equal variances assumed	0.018	0.893	2.584	68	0.012	13.336	5.161	3.038	23.634
NPM	Equal variances not assumed	27.065	0.000	5.196	44.332	0.000	51.716	9.953	31.661	71.772
CR	Equal variances assumed	0.608	0.438	0.773	68	0.442	0.536	0.693	-0.847	1.920
DE	Equal variances assumed	0.199	0.657	-1.264	68	0.211	-0.527	0.417	-1.359	0.305
CIR	Equal variances not assumed	10.175	0.002	-2.472	46.559	0.017	-56.262	22.756	-102.052	-10.472
GPR	Equal variances not assumed	2.788	0.100	3.249	53.920	0.002	30.242	9.309	11.578	48.906
OPR	Equal variances not assumed	8.723	0.004	2.695	45.764	0.010	45.955	17.054	11.623	80.288
EPS	Equal variances assumed	0.997	0.322	1.899	68	0.062	3.372	1.776	-0.172	6.916
TA	Equal variances assumed	1.500	0.225	0.311	68	0.757	0.146	0.471	-0.793	1.086

Source: Authors' elaboration.

## 5. CONCLUSION

The findings of our research suggest a prominent decline in the profitability of Thailand's hotel industry post the outbreak of the COVID-19 pandemic, reflecting similar observations in existing literature. Corresponding to our investigation, analyses carried out by Mohamad Said et al. (2021) concerning the Malaysian hospitality sector, and Temelkov (2022) focusing on specific hotel chains and vacation destinations, and other scholars demonstrate a widespread pattern of reduced financial performance universally. These research endeavors collectively emphasize a notable decrease in hotel incomes, compounded by escalating operational expenditures amidst rigorous health protocols and limitations on travel.

Our investigation unveiled that the leverage, quantified by the DE ratio, did not exhibit statistically significant alterations throughout the pandemic for Thai hotels. This discovery implies a degree of steadiness in the financial structure of hotels despite the economic downturn triggered by COVID-19. This aspect of our results resonates with the analysis put forth by Temelkov (2022), while not explicitly delving into leverage ratios, accentuates the diverse financial performance and effectiveness observed among various hotels during the pandemic. Temelkov's research underscores the repercussions of governmental interventions and hotel-initiated measures, which could indirectly impact leverage through financial backing and cost control strategies, even though the primary focus of the study lies in revenue and operational efficiency.

In terms of operational ratios, such as GPR and OPR, our study signifies a notable downturn amid the pandemic, mirroring the overarching operational hurdles and diminished profitability within the Thai hotel industry. This regression aligns with the general patterns outlined by Temelkov (2022), where hotels globally encountered a decline in operational effectiveness and a surge in expenses relative to income. The EPS manifested a substantial decrease in our study, emphasizing the direct repercussions of the pandemic on the financial performance of Thai hotels. This dip in EPS mirrors the broader financial strain within the sector, as revenue streams were significantly impeded by travel constraints and dwindling demand (Gursoy & Chi, 2020; Liew, 2022).

Despite these challenges, our examination indicates that not all financial metrics, but CR and DE, underwent statistically significant changes. This resilience, possibly reflecting effective strategic planning and strong financial support, suggests varying impacts within the sector. Moreover, the fact that most hotels maintained their asset size without statistical variances during the pandemic aligns with the evidence supporting our hypotheses regarding the pandemic's notable negative effects on profitability, operational ratios, and EPS. An essential lesson learned is the imperative for hotels to fully adopt digital transformation. The integration of digital and contactless technologies not only improves guest experiences and operational efficiency but also aligns with the evolving safety and convenience expectations of customers (Das, 2023). Furthermore, hotels succeeded in diversifying by exploring alternative income streams (Kahveci, 2023), such as offering extended-stay packages for remote workers, repurposing unused spaces into co-working areas, and enhancing food delivery services. The strategies could include cultivating strong connections with all stakeholders, emphasizing health and safety protocol, and providing more attention to domestic tourism (Ranasinghe et al., 2020; Robina-Ramírez et al., 2021).

The incorporation of stakeholder theory (Barakat & Wada, 2021) and crisis management theory (Wut et al., 2021) aids in contextualizing these findings, offering insights into the strategies that may have enabled certain hotels to navigate the pandemic more successfully than others. Stakeholder theory emphasizes the importance of prioritizing relationships with key stakeholders.

Likewise, crisis management theory sheds light on the significance of preparedness and adaptability during unforeseen crises (Orozco et al., 2023; Ziakas et al., 2021).

This current paper holds significant importance for future research endeavors in several key ways. This paper, firstly, serves as a foundation for understanding how the hospitality sector's response to the COVID-19 pandemic, particularly within Thailand. As researchers seek to generalize findings across nations, this paper highlights the necessity of acknowledging common challenges and responses within the global hospitality industry. Secondly, by comprehending the impact of governmental interventions on sectoral resilience, this paper provides valuable insights for policymakers grappling with similar scenarios worldwide. Future research can build upon these insights by incorporating new variables such as cultural, regulatory, increased number of samples, and hotel type distinctions (budget, midscale, upscale, and luxuries), as well as board characteristics. With a new or next crisis, customer behavior may also change to equip to the new settings. Additionally, methodologies like interviews and focus groups can deepen the understanding of changes in different crises. Lastly, the promotion of comparative studies and international cooperation can foster a more nuanced understanding of the global hospitality landscape, facilitating recovery strategies post-pandemic and beyond.

Although this study has made significant contributions, it possesses certain limitations that necessitate consideration. One primary restriction is the emphasis on the hotel industry within Thailand, which might not entirely capture the distinctive obstacles and reactions encountered by other nations with varying socio-economic circumstances. Furthermore, the dependence on secondary data resources could introduce prejudices and restrict the profundity of insights in comparison to primary data-gathering approaches. The exploration also fails to accommodate the fluid and developing nature of the outbreak, implying that certain discoveries may swiftly become obsolete. Subsequent research should aim to address these limitations by assimilating more varied geographical areas, implementing longitudinal examinations to monitor changes over time, and employing qualitative and quantitative methodologies for a more comprehensive analysis.

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