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The Effect of Risks on Malaysian Banks Profitability: The Islamic and Conventional Banks

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ABSTRACT

The banking sector in Malaysia has seen substantial changes since the global financial crisis, with a greater focus now being placed on the value of risk management. The study aims to examine the impact of internal and external bank risks on Malaysia's profitability. Utilising unbalanced panel data from 2010 to 2022, it includes 29 banks, comprising 14 Islamic banks and 15 conventional banks. The random effect model is found to be the most appropriate for the full samples and Islamic banks, while the fixed effect model is the preferred choice for conventional banks. Notably, Islamic banks tend to be less profitable compared to conventional banks. Even though Islamic banks display lower profitability compared to conventional banks, they have greater resilience, and their profitability is less impacted during crisis periods compared to conventional banks. Stronger resilience in Islamic and conventional banks is important to ensure sustainability and profitability.

INTRODUCTION

Knowing banking businesses, their day-to-day activities and operations involve risks. Risks are inevitable in banking, but they can be mitigated. Among others, liquidity risk, credit risk, and market risk are types of risks that are frequently discussed. Liquidity risk occurs due to the mismatch between the asset and liability management of banks. Credit risk happens because of the borrowers' default. While market risk occurs due to the banks losing their financial investments caused by unfavourable price movements, there is a huge demand for Islamic financing in Malaysia because most Malaysian citizens are Muslim; hence, the Muslim community in Malaysia needs Islamic banking institutions. This is because Islamic banking institutions operate under the laws and guidance of *Shariah* that prohibit activities that include *riba* (usury), *gharar* (uncertainty), *maysir* (gambling), and all elements and activities that contradict Islamic principles.

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According to Quan et al. (2019), Islamic and conventional banking institutions have different profit-making concepts. For example, conventional banking institutions rely on interest as their core income, while Islamic banking institutions heavily utilise the profit-loss sharing concept to avoid *riba* (usury), *gharar* (uncertainty), and *maysir* (gambling). The Islamic banking institution has experienced exponential growth parallel to conventional banks and is widely accepted by the Muslim and non-Muslim communities (Belkhaoui, 2023). Hence, Islamic banking institutions must operate within the *Shariah* principles to fulfill Shariah compliance and to present an Islamic corporate image, such as by disclosing and becoming transparent in all their reporting, to reduce conflicts of interest between the banks and shareholders.

Conventional banks in Malaysia had a greater profitability of 1.2 percent compared to Islamic banks, which had a return on assets of just 0.7 percent, according to Bank Negara Malaysia's annual report for 2020 (BNM, 2020). Conventional banks are more profitable than Islamic banks because the total financing disbursed by conventional banks is higher than that of Islamic banks. This can be supported by Gani and Bahari (2021), who found that Malaysian conventional banks are marginally more profitable than Islamic banks. Although Malaysia is a global leader in Islamic banking and finance, conventional banks still hold a larger market share (BNM, 2020). By 2030, BNM wants Islamic banks to compete with or outperform conventional banks (BNM, 2020). However, Islamic banks saw inferior profitability compared to conventional banks during the COVID-19 pandemic, which started in 2020, highlighting the need for more research (Gani & Bahari, 2021). According to Goswami and Malik (2024), the COVID-19 pandemic is one of the reasons for the underperformance of banks in the Indian banking sector. This is due to the financial distress and limited lending flexibility during the crisis. A study by Ghenimi et al. (2024) reveals that conventional banks were less stable relative to Islamic banks during the COVID-19 pandemic crisis. These Islamic banks outperformed their conventional counterparts during the crisis period.

Hence, the study would like to emphasize what more could be done to ensure that the vision of BNM is to achieve a market share equal to or greater than that of the conventional bank by the year 2030. Therefore, the study investigates the effects of internal and external risks on Malaysia's Islamic and conventional banks' profitability. The study is also interested in analysing the significant differences in banks' profitability during the crisis and non-crisis periods for Islamic and conventional banks.

LITERATURE REVIEW

The study analyses the risks associated with Islamic and conventional banking in Malaysia and their impact on profitability from 2010 to 2021. Jasman and Murwaningsari (2022) show that banks' credit risk is decreased when they set aside a larger sum for provision loan losses than their total loans. However, because it comes from bank profits, this increased provision might potentially reduce their profitability. According to studies by Hakimi et al. (2020) and Shair et al. (2019), the profitability of banks and liquidity risk are consistently negatively related to profitability. A bank's profitability may suffer if there is a large or insufficient liquidity gap. This is because the bank may have to borrow money from the repo market at a higher interest rate, raising its borrowing expenses. Furthermore, Al-Sharkas and Al-Sharkas (2022) claim that capital risk has a positive relationship with profitability. These authors argue that the regulatory standards and requirements for capital adequacy restrict the bank's capacity for taking risks and their ability to engage in investment activities and financing operations, eventually lowering, and reducing their capacity to earn income to increase profitability. Saif-Alyousfi (2022) finds that a bank's profitability depends on the capital adequacy ratio. Strong capital positions and lower capital risk can enable banks to borrow money at lower rates and take advantage of more business possibilities, which can help boost their profitability.

Duho et al. (2020) discovered market risk and return on assets were positively correlated. Banks often reduce expenditures, administrative efforts, and loan-related expenses during times of elevated market risk. Additionally, the banks devote additional funds to marketable instruments like Treasury bills.

However, Tan et al. (2017) provide a different perspective than the authors before. The authors discover that market risk significantly and negatively impacts a bank's profitability. The study concentrated on Chinese commercial banks and found that non-government bond investments carried more risks than other bond investments. According to a study by Baber (2018), Islamic banks in the Gulf Cooperation Council area outperformed conventional banks during times of crisis. Assets, equity, revenue, costs, earnings, market capitalisation, and leverage ratio are all increasing and experiencing growth in Islamic banks. El-Chaarani et al. (2022) indicate conventional banks performed better in terms of finances and liquidity during the COVID-19 epidemic than Islamic institutions. Conventional banks showed a stronger ability to manage financial risks throughout the crisis than Islamic banks. Another study in Pakistan by Majeed and Zainab (2021) claims that Islamic banks are less profitable than conventional banks for various reasons. Islamic banks have to spend more on marketing, advertising, and technological developments because they are still relatively new players in the market. Following the debatable arguments, the study proposes the following hypotheses:

H₁: There is a significant relationship between credit risk and Malaysian bank's profitability.

H₂: There is a significant relationship between liquidity risk and Malaysian bank's profitability.

H₃: There is a significant relationship between capital risk and Malaysian bank's profitability.

H₄: There is a significant relationship between market risk and Malaysian bank's profitability.

H₅: There is a significant difference in bank profitability in Malaysia during the crisis and non-crisis periods.

H₆: There is a significant difference in bank profitability in Malaysia between Islamic and conventional banks.

SAMPLE DESCRIPTION AND PROXY MEASUREMENT

Malaysia features a total of 43 operating banking institutions, including 16 Islamic banks and 27 conventional banks as of 2021, including both domestic and foreign banks. However, due to missing values and a lack of data for at least three years between 2010 and 2021, not all these banks are included in the final sample. Due to the data problems, the study, after putting various filtering and selection methods in place, removed 13 banks from the study. In this final sample, there are 15 conventional banks, which represent 55.56 percent of the overall population of conventional banks, and 14 Islamic banks, which represent 87.5 percent of the total population of Islamic banks. It is significant to highlight that the study's sample includes both international and domestic financial institutions, providing a thorough picture of Malaysia's banking environment.

Return on average assets and return on average equity are commonly used to measure a bank's profitability. Meslier et al. (2020), Ghose and Maji (2022), and many others used both measurements to measure the bank's profitability. The return on average total assets (ROAA) is chosen to evaluate the profitability of both Islamic and conventional banks by focusing on the income generated from their assets rather than on income for their shareholders. By measuring the effectiveness with which banks utilise their assets, ROAA offers valuable insights into the efficiency and productivity of their operations.

Banks' internal and market risks can be measured in various ways; hence, they can be interpreted differently. However, the proxy can still represent the independent variables. Below are the measurements used to represent the potential determinants of risks: credit risk, liquidity risk, capital risk, market risk, and crises, as the dummy for the study.

In this study, the loan loss provision to total loan ratio has been used to measure the bank's credit risk, whereby the higher the ratio, the higher the bank's loan provision against total loans, which indicates that the bank is closer to bankruptcy as the risk of insolvency will be high (Jasman & Murwaningsari, 2022).

According to a study by Megeid (2017), banks with higher current asset-to-total deposit ratios tend to exhibit a stronger liquidity position, indicating lower risk levels. Banks must establish a maximum liquidity threshold to minimise risk and a minimum liquidity level to effectively manage liquidity risk to ensure efficient earnings generation. By utilising the current asset-to-total deposit ratio as a tool for analysis, researchers and banking institutions gain insights into the liquidity risk profile of different types of banks.

Khan (2022) uses capital adequacy ratios to measure the level of capital risk the bank faces, alerting the bank to protect them from being liquidated due to a bank run. The same author stated that the capital adequacy ratio could be measured by adding tier 1 capital to tier 2 capital and dividing it against risk-weighted assets. Moreover, Ramlall (2018) highlights that tier 1 capital is a bank's core capital that consists of equity capital used to absorb any losses that prevent the bank from continuing to operate its operation, while tier 2 capital consists of unaudited retained earnings used to protect the bank from the risk of bankruptcy.

The study uses the proxy of investment in securities against total assets to measure the significance of the bank's profitability. This is because investment activities are one of the ways for banking institutions to generate income. According to Tan et al. (2017), security investment against the total asset ratio can be used to measure the bank's market risk, as an increase in the securities investment against the total asset will increase the bank's market risk as the bank is exposed to the volatility of the market movement. The study focuses on the recent risk significantly affecting the bank's profitability in Malaysia, the coronavirus (COVID-19), from 2020 to 2021. The study identifies the year affected by the crisis in the data as "1," while the year not affected by the crisis in the data is "0." The study spans 11 years, including 2020 and 2021, when COVID-19 peaked in Malaysia. Hence, 18.20 percent represents the crisis period of COVID-19. Meanwhile, the remaining 81.80 percent, or the balance of 9 years, represents the non-crisis period.

Islamic and conventional banks act as bank dummies. Islamic banks will be indicated as "1", while conventional banks will be indicated as "0." According to Toumi (2020), Islamic banking institutions that follow Islamic laws and principles may not be as profitable as conventional banking institutions. This can be attributed to several reasons. Firstly, Islamic banks may not have as much experience in the banking industry as traditional banks, making it more difficult to navigate the industry and make profitable decisions.

Equation (1) refers to Model A, which represents the data of both conventional and Islamic banks. The dummy variable Islamic Bank is added as an additional variable to this equation. This variable enables the model to distinguish between conventional and Islamic banks. This dummy variable is included in the equation to take into consideration the special features and practices of Islamic banks. As a result, Model A offers a thorough framework for examining the variables affecting the profitability of both types of Malaysian banks. Equation (2) represents Model B, which, on the other hand, only considers data relevant to Islamic banks. There is no need to include the additional dummy variable Islamic Bank because this equation only looks at the performance of Islamic banks. Model B streamlines the study by taking into account the distinct dynamics and factors that affect the profitability of Islamic banks in Malaysia. Equation (3), designated as Model C, similarly only applies to conventional banks. In this instance, similar to Model B, it is not necessary to provide the additional dummy variable, Islamic Bank. Model C focuses on investigating the factors that influence the profitability of conventional banks in Malaysia. Equations (1), (2), and (3) display as follows:

Model A:

$$PROFIT_{it} = \gamma_0 + \gamma_1 CR_{it} + \gamma_2 LR_{it} + \gamma_3 CAP_{it} + \gamma_4 MR_{it} + \gamma_5 Crisis_{it} + \gamma_6 Islamic Bank_{it} + \mu_{it} \tag{1}$$

Model B:

$$PROFIT_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 LR_{it} + \beta_3 CAP_{it} + \beta_4 MR_{it} + \beta_5 Crisis_{it} + e_{it} \tag{2}$$

Model C:

$$Model C: PROFIT_{it} = \alpha_0 + \alpha_1 CR_{it} + \alpha_2 LR_{it} + \alpha_3 CAP_{it} + \alpha_4 MR_{it} + \alpha_5 Crisis_{it} + \varepsilon_{it} \tag{3}$$

PANEL DATA ANALYSIS

Table 1 exhibits the result of the multiple regression for all three models, which are Model A represents mixed banks, Model B represents Islamic banks Model C represents conventional banks shows a relationship between the independent variables and dependent variable. The R-squared for Model A is 0.26, which indicates that 26 percent of the independent variables are able to represent the bank’s profitability. Hence, the p-value of prob > chibar2 in Model A is significant at the 1 percent level, which fits and is robust to the study. As for Model B and Model C, the R-squared shows 0.19 and 0.16, respectively. This means that 19 percent and 16 percent of the independent variables are able to represent profitability for Islamic and conventional banks, respectively. Both Models B and C show that the model is fit and robust.

The regression results in Model A in terms of credit risks show that all types of banks experience a negative relationship with the bank’s profitability. The result indicates that an increase in credit risk will decrease the bank’s profitability. The research finding can be supported by Duho et al. (2020), where the researchers find a negative relationship between credit risk and profitability. This is because banks allocate more funds for potential losses when they believe there is a greater chance that borrowers may fail to repay the loan, which results in an increase in credit risk, and this can affect their profitability negatively. Based on this result, conventional banks experience higher impacts on their profitability in the event of high credit risk compared to Islamic banks. This is because conventional banks tend to have higher financing activities, thus resulting in higher credit risk (Afroj, 2022; Hakimi et al., 2020).

Table 1. Multiple regression for Models A, B, and C

	Mixed banks (Model A)		Islamic Banks (Model B)		Conventional Banks (Model C)	
	REM with Cluster Regression		REM with Cluster Regression		FEM with Robust Standard Error Regression	
	Coefficient	Standard Error	Coefficient	Standard Error	Coefficient	Standard Error
Credit Risk	-10.388 ***	3.497	-21.648 ***	4.595	-22.127 **	7.522
Liquidity Risk (Inverse Proxy)	0.042 **	0.139	0.065	0.158	-0.248	0.175
Capital Risk (Inverse Proxy)	0.007 **	0.003	-0.018 ***	0.005	0.004	0.004
Market Risk	-0.613 *	0.365	17.220 ***	3.320	0.076	0.541
Crisis	-0.236 ***	0.032	-0.128 ***	0.026	-0.272 ***	0.066
Islamic bank	-0.377 ***	0.101	-	-	-	-
Constant	1.249 ***	0.116	0.403 ***	0.095	1.076 ***	0.089
Total Observation	287		139		147	
Max Observation	12		12		12	
Min Observation	5		6		5	
Groups	29		14		15	
R-squared	0.26 (Within)		0.38 (Within)		0.16 (Overall)	
Wald chi-squared	138.9***		87.84***		-	
F (5,13)	-		-		20.75***	

Notes: *** is statistically significant at the 1% level; ** is statistically significant at the 5% level and * is statistically significant at the 10% level.

The result of the study, which is aligned with Tan et al. (2017), suggests that there is a significant and positive relationship between capital risk and bank profitability. According to the study, decreased profitability is caused by higher capitalisation levels or lower capital risk. As a result of lesser risk, this means that banks with greater capital positions have lower projected returns. To compare Islamic and conventional banks, Table 1 shows that Islamic banks experience a negative relationship between capital risk and the bank's profitability. Meanwhile, conventional banks indicate that they experience a positive relationship between capital risk and the bank's profitability. The result is supported by Jiang et al. (2020). Banks with a small capital reserve and high capital risk tend to reduce their financing activities and tend to take less risk when it comes to their activities, thus impacting the bank's profitability.

Model A discovers a negative relationship between market risk and profitability. According to Tan et al. (2017), the study reveals that non-government bond investment is more exposed to risks compared to other types of bonds. This, as a result, causes the banks to experience additional costs that outweigh the financing costs, thus reducing the bank's profitability. Based on the coefficients in both models, Islamic banks's profitability is impacted the most when there is an increase in market risk. Islamic banks commonly engage in trading and holding actual or physical commodities due to the nature of the Islamic contract. Hence, Islamic banks are prone to high volatility and fluctuation in commodity prices.

Regression analysis for Models A, B, and C discloses lower profitability during the crisis period. Islamic banks reveal a result of 0.13 percent, while Model C shows a result of 0.27 percent, which indicates that during the crisis period, conventional banks's profitability is impacted the most compared to Islamic banks. This is aligned with Akkas and Al-Samman (2022), who found that during COVID-19, Islamic banks performed better than conventional banks due to their ability to avoid Shariah non-compliance activities. For example, Islamic banks are restricted from engaging in any financing and investment activities that are uncertain and involve high speculation compared to conventional banks that are not limited by Shariah law.

The regression result shows that Islamic banks are less profitable compared to conventional banks by 0.38 percent. This can be supported by Toumi (2020) and Khalil and Siddiqui (2019), who found that Islamic banks experience lower profitability. The author explains that conventional banks have a bigger capacity to provide higher financing activities, which results in high profitability.

CONCLUSION AND RECOMMENDATION

The regression analysis produced significant findings for credit risk, capital risk, and market risk with respect to the goal of examining the relationship between internal and external bank risk and profitability. This indicates the study is able to prove the proposed hypotheses except for liquidity risk. There is a negative relationship between credit risk and profitability for mixed banks, Islamic and conventional. Lower profitability resulted from increased credit risk because banks had to set aside more money for possible losses. As a result, financial institutions ought to have strong credit risk assessment and mitigation mechanisms in place. To do this, it may be necessary to undertake rigorous credit checks, enhance the financing underwriting procedure, and continuously monitor borrower creditworthiness.

Additionally, capital risk showed a positive relationship with profitability, highlighting the need to keep a sufficient capital buffer for a balanced relationship between risk and profitability. The study reveals that Islamic banks are less impacted in terms of capital risk towards the bank's profitability, and the result is negatively related. This is because of the fact that Islamic banks have a lower capital base, which lessens their incentive to increase their financing activities and instead focuses on increasing their capital. This, however, reduces their profitability. In order to balance capital risk and profitability, Islamic and conventional banks should routinely review their capital balances and make the necessary adjustments to ensure that the banks have sufficient funds to further extend their credit facilities and improve their profitability.

Profitability and market risk were positively related, with Islamic banks managing market risk more skilfully as a result of their *Shariah*-compliant investment strategies. Due to the engagement in the trading of physical commodities and indirectly by Islamic banks, they are more exposed to the volatility of the price of commodities as well as indirectly affected by the interest rate risk. Islamic banks, which are renowned for their preference for less volatile assets and avoidance of substances like *gharar*, should remain consistent in following the *Shariah* principles and at the same time explore other investments in financial assets to further improve their profitability.

Additionally, the study's goal of examining the notable variations in bank profitability throughout crisis and non-crisis times was effectively accomplished. Regression studies show that Islamic and conventional banks experienced lower profitability during times of crisis, in which conventional banks suffered a greater decline than Islamic banks. This result is consistent with other studies emphasizing the ability of Islamic banks to withstand crises because of their devotion to *Shariah* principles and avoidance of prohibited behaviour. Because the fact that conventional banks' profitability is more affected during crisis periods compared to Islamic banks, conventional banks may adopt the strategy used by Islamic banks to stay resilient during times of crisis via adherence to *Shariah* principles.

Finally, the study compared Malaysia's Islamic and conventional banks' profitability. According to the regression results, conventional banks made a greater profit than Islamic banks. The report ascribed this to conventional banks' improved ability to engage in more financing operations, use cutting-edge tools, and diversify their investing activities, all of which provide greater profits. Islamic banks' profitability was impacted by issues such as greater marketing expenditures and high technological development costs. Islamic banks should prioritise improving their capacity to produce earnings in order to increase profitability.

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CONFLICT OF INTEREST STATEMENT

The authors agree that this research was conducted in the absence of any self-benefits, commercial or financial conflicts and declare the absence of conflicting interests with the funders.

AUTHORS' CONTRIBUTIONS

Noralia Aznol and Alif Shahezzat Shahril Nizam carried out the research, wrote and revised the article. Nur Hazimah Amran conceptualised the central research idea and provided the theoretical framework as well as ensuring all technical requirements. Wahida Ahmad designed the research, supervised research progress, and anchored the review, revisions and approved the article submission.

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