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Comparative Analysis of Financial Performance in Indonesian Islamic Banks: The Impact of Spin-Offs, Mergers, and Conversion

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Abstract

This study conducts a comparative analysis of Indonesian Islamic banks' performance before and after spin-off, merger, and conversion. Using a quantitative approach, the research applies paired t-tests and Wilcoxon tests to assess financial performance across six categories: liquidity, financing, efficiency, profitability, capital adequacy, and non-performing financing. Data from six Islamic banks over ten years were analyzed, comparing performance pre- and post-establishment. The findings reveal no significant differences in performance for banks that underwent pure spin-offs. However, banks formed through mergers demonstrated improvements in operational efficiency, return on assets (ROA), and capital adequacy (CAR), while conversions exhibited strong financing performance but faced capital risk and lower profitability. These results suggest that mergers offer a more efficient establishment method for enhancing bank performance, while conversions require careful capital management. The research highlights the importance of strategic decisions regarding the choice of establishment method for Islamic banks, with significant implications for bankers and policymakers aiming to optimize Islamic bank performance.

Keywords: Islamic Banking; Spin-off; Merger; Conversion; Financial Performance

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Introduction

Islamic banks serve as intermediary institutions, with their operations and financial activities required to adhere to Islamic law (Sharia). According to Indonesia's Banking Law Number 21 of 2008, an Islamic banking unit refers to a division within a conventional bank that operates based on Sharia principles. Some countries have Islamic banking windows within conventional banks, while others have established Islamic banks as subsidiaries of conventional banks. Regardless of the structure, all Islamic banking contracts and activities must comply with Sharia, with the overarching aim of fulfilling *Maqasid Sharia.*

The Islamic banking industry plays a crucial role in supporting economic activities, particularly in countries with dual-banking systems, where Islamic banks enhance the competitive dynamics of the financial industry. The enactment of Indonesia's Islamic Banking Act No. 10 of 1998 has further encouraged the growth of Islamic banking players (Otoritas Jasa Keuangan, 2020). As of September 2020, there were 14 fully-fledged Islamic commercial banks and 34 Islamic banking units in Indonesia (Otoritas Jasa Keuangan, 2020). However, the growth of Islamic banking units has been relatively slow compared to both conventional and Islamic commercial banks.

In recent years, the demand for Islamic banking licenses has increased significantly. In Indonesia's financial industry, Central Bank Regulation Number 11/15/PBI (2009) mandates that conventional commercial banks engaged in Islamic banking activities must establish an Islamic banking unit. Furthermore, Article 40 of this regulation requires these banks to spin off their Islamic banking units into independent Islamic banks if certain conditions are met. Specifically, the spin-off must occur if the Islamic unit's assets reach 50% of the parent bank's total assets or if 15 years have passed since the enactment of the Sharia Banking Law (Law Number 21 of 2008).

Despite these regulations, the growth of Islamic banking remains sluggish, with Islamic banking assets accounting for only 6.07% of total banking assets in April 2020. Supriyono *et al.*, (2019) argue that spinning off Islamic banking units is a crucial strategy for stabilizing and expanding these institutions. Additionally, organizational expansion through spin-offs is considered a key approach to enhancing economic power (Kandil and Chowdhury, 2014).

Mohammed and Muhammad (2018) note that the Islamic banking industry operates within a monopolistic market structure, characterized by intense competition. News of mergers and acquisitions can significantly impact the share prices of Islamic banks. When such events occur, the market responds swiftly, with share prices either rising or falling (Kandil and Chowdhury, 2014). In this scenario, the share price will instantly imitate to good or bad news (Rieck and Doan, 2009). This behavior supports signaling theory, where positive news leads to an increase in share prices, while negative news can have the opposite effect (Deng and Yang, 2015). Interestingly, Rahman *et al.*, (2018) found a negative abnormal return in the share prices of Pakistani banks following mergers and acquisitions, indicating that corporate mergers may have varying effects on long-term performance in different markets (Kandil and Chowdhury, 2014).

Further studies, such as those by Nasuha (2012) and Hamid (2015), highlight that the spin-off of Islamic banking entities can not only increase market power but also improve profitability, efficiency, and financial ratios. This demonstrates the significant benefits of spin-offs (Siswantoro, 2014; M. Nur Rianto Al Arif, 2015; Yuspin and Wardiono, 2017). Additionally, mergers, acquisitions, and conversions are viewed as strategies to reduce risk (Rieck and Doan, 2009). Mahmood *et al.*, (2012) suggest that Islamic banks pursue mergers to strengthen their position at the macroeconomic level, rather than at the microeconomic level. Mergers and acquisitions also offer better prospects for future growth and stability in cash flows.

Ali and Bansal (2020) highlight three key domains that Islamic banks must consider before engaging in mergers and acquisitions: motives, post-merger managerial strategies, and economic factors influencing the decision. Similarly, Thought et al. (2013) identify several motives for mergers and acquisitions, including shareholder benefits and other rational choices, improving productivity by reducing operating costs, and responding to macroeconomic phenomena, where mergers enable companies to withstand economic disruptions.

This research focuses on the second motive—productivity—by analyzing the performance of Islamic banks before and after spin-offs. A robust performance is crucial to sustaining market confidence (Rusydiana *et al.*, 2019; Prasetyo *et al.*, 2019; Taga, Nawawi, and Kosim, 2019; Hadziq, 2022; Trinugroho *et al.*, 2021). Consequently, this study aims to determine which banks exhibit the best performance following spin-offs, conversions, or mergers. Unlike previous studies, which primarily employed dummy variables, Manova, and post hoc tests (Rusmita,

S.; Putri, F.; Suprayogi, N. and Vendy, 2022), this study utilizes Wilcoxon and paired t-tests to evaluate performance across different establishment methods.

This research will identify the best-performing Islamic banks post-establishment as full-fledged institutions, offering significant implications for bankers and regulators. It will guide decision-making on the most effective methods—whether spin-offs, mergers, or conversions—to establish high-performing Islamic banks.

The study examines financial performance across six categories: liquidity, financing performance, efficiency, profitability, capital adequacy, and non-performing financing risk. The analysis spans ten years, comparing performance before and after the establishment of Islamic banks.

Literature Review

Methods of Establishing Islamic Banks

When converting an Islamic business unit into an Islamic commercial bank, Karim (2010) identifies a recent trend of forming full-fledged Sharia banks through the conversion of conventional banks. Another mechanism involves acquiring a small conventional bank and merging it with an Islamic business unit. There are several methods for establishing Sharia banks, such as pure spin-offs, mergers, and conversions (Maulida & Aam Slamet Rusydiana, 2022; Sarifudin & Faturohman, 2017). The first approach involves a conventional bank that already offers an Islamic banking unit, where additional capital of at least 500 billion IDR is injected to create a full-fledged Islamic bank (Prasetyo *et al.*, 2019). This is known as the pure spin-off method. The second approach involves the merger and acquisition of Islamic banking units among conventional banks to establish a full-fledged Islamic bank. The final approach is employed by conventional banks without an Islamic banking unit, where they acquire a small conventional bank and convert it into an Islamic banking entity.

Challenges in Mergers and Acquisitions

Research by Bindabel (2020) highlights the challenges of merging Islamic and non-Islamic firms, particularly because Islamic banks adhere to Sharia compliance, which imposes more stringent regulations than non-Islamic firms. Tamimi *et al.*, (2021) argue that the merger of Islamic banking units with conventional banks presents additional complexities, not only due to Sharia compliance but also due to

differences in corporate culture and systems. Furthermore, critics argue that Islamic banking is often a replication of conventional banking, with limited contributions to economic growth (Sarker, Khatun, and Alam, 2020; Ghoniyah and Hartono, 2020). However, despite its challenges, Islamic banking has made significant strides in some countries. For instance, in Malaysia, the Islamic banking industry has contributed substantially to the country's economic development over the past six decades. Malaysia has also developed a comprehensive Islamic financial ecosystem that supports Islamic banks, including Takaful (Islamic insurance), Islamic capital markets, and other non-banking financial institutions (Mohamad, Mahomed, and Kamil, 2017; Purna, 2018; Markom and Ismail, 2009).

The combination of Islamic banking business entities or organizations is an important strategy to stabilize or expand the company (Supriyono *et al.*, 2019). This combination can be incurred through merger or acquisition. Merger is defined as a collaboration between two or more organizations whereby only one organization remains active as a legal entity while the other will stop their Islamic banking business activities (Abbas *et al.*, 2014; Moin 2003). Acquisition, on the other hand, is the takeover of ownership or control of shares or properties by other companies over another company whereas there still exists a legal entity of the taken over organization (Moin, 2003).

The expansion of an organization which is done either via merger or acquisition is treated as an important alternative to enlarge the economic power (Kandil and Chowdhury, 2014; Supriyono *et al.*, 2019). It is also considered as a mechanism to market certain projects in order to attract investment from investors by showing the future potential of that project (Kandil and Chowdhury, 2014). Therefore, those Islamic banks which underperform or are less efficient are acquired or merged by relatively more efficient Islamic banks. Not to mention that Islamic banks adopt the mechanism of mergers to grow faster and enlarge economic scale, whereas they will have improved admittance to capital market, leading to financial benefits through lower cost of capital (Altunbaş and Marqués, 2008); Natt, Al-Habshi, and Zainal, 2009), gearing marketing abilities, research, managerial skills and technology transfers (Azofra, Olalla, and Olmo, 2008; Supriyono *et al.,* 2019).

Performance Islamic Bank after Spin-Off

Through mergers, Islamic banks will have higher return of investment and equity (ROI and ROE) compared to other banks (Natt *et. al.,* 2009) which evident by findings of Kandil and Chowdhury's (2014) study in UK Islamic banks. Furthermore,

Egyptian banks showed improvement in return of equity after the merger, which is significant in profit growth (Badreldin and Kalhöfer, 2009). However, Lebanese banks have shown insignificant results in regards of ROE and ROI except EPS after merger and acquisition (Sujud and Hachem, 2018).

Therefore, Islamic banks are merged and acquisitioned for mainly two reasons, the strategic rationale and efficiency gains (Lommerud, Olsen, and Straume, 2006). Furthermore, the first reason is considered the economic scope through enhanced collaboration between engaged Islamic banks while the second is the expectation of changing market structure through merger and acquisition or conversion will lead to higher profit (Kandil and Chowdhury, 2014; Moin 2003). Furthermore, collaboration between two low cost operations by combining organizations links to profit maximization (Barney, Wright, and Ketchen Jr., 2001; Moin 2003). In addition, merger and acquisition also facilitate the broker through cross-selling, enhancing opportunity of managerial specialization, tax benefits by combining or acquisition of the loss maker and also geographical or diversification factors (Kandil and Chowdhury, 2014). The impact of mergers and acquisitions can be seen through quantitative indicators (accounting reports, and market valuations) and economic information, especially financial indicators that are key to perform calculations (Ali and Bansal, 2020). Thought *et al.,* (2013) said several failures come from the premerger and the pre-acquisition period, in case the banks too fast for doing due diligence process, whereas this part is key elements to know well about banks partner and cross-checking about asymmetric information between two companies.

Previous Study and Hypothesis

Hence, Abbas *et al.,* (2014) did not find any improvement after merger and acquisition of banks in Pakistan. Interestingly, other cases in Malaysia show Islamic banking has higher operating costs when compared to conventional banking (Abdul-Majid, Saal, and Battisti, 2011). In addition, the high cost of the merger and acquisition of Islamic banks causes the use of excess banking funds so that which has an impact on reducing its productivity in several countries like Malaysia and Pakistan (Abdul-Majid, Saal, and Battisti, 2011; Ahmed, *et al.,* 2018)). Research from Al Tamimi *et. al.,* (2021) also found that consolidation in Islamic banks in the MENA region negatively impacted the operational efficiency of the bank. In contrast, Muhammad *et. al.,* (2019) recorded positive and significant improvement of the banking sector on performance after merger and acquisition in Pakistan. So, based on explanation above the hypothesis is:

H_1 : The efficiency (OER) of Islamic bank are different before and after spin off

Sinha and Gupta (2011) identified that liquidity of financial companies reduced after merger and acquisition in the period of 1993-2010 in India, whereas Babu (2019) identified better financial performance for banks after merger in India. Supriyono *et. al.,* (2019) found that merger and acquisition of Islamic banks (Panin Dubai Syariah Bank and Dubai Islamic bank) brought significant efficiency value of 99% in 2015 and lessened the inefficiency of input and maximized efficiency in output variable. Based on explanation above the hypothesis is:

H_2: There are differences liquidity performance before and after spin off

Capital is one of the important factors in developing a business venture and accommodating the risk of loss. The amount of capital of a bank will affect whether or not a bank is able to efficiently carry out its activities, and can affect public trust in the bank's performance. Public trust will be seen from the amount of demand deposits, deposits, and savings that exceed the amount of capital deposits from its shareholders (Agustin, 2018). According to Agustin (2018), the CAR ratio is measured to determine the adequacy of capital owned by a bank to support assets that contain or generate risk. The higher the CAR, the stronger the bank is to bear the risk of each credit. Based on the explanation above, the hypothesis is:

H_3: Islamic bank have differences Capital before and after spin-off

There are extensive studies done in the context of Islamic and conventional banks' performance. A study on banks' spin-offs conducted by Nasuha (2012), indicates that assets, financing, deposits and NPFs show differences in financial performance after spin-off. Another research was conducted by Hamid (2015) and showed that NPF and OER policies have an influence on profitability level in the Indonesian Islamic banking industry. Based on research conducted by Siswantoro (2014) , it can be concluded that capital injection after the spin-off can accelerate the growth of Islamic banks with the support of effective management. Nasuha (2012) found that assets, financing, deposits and NPF showed differences one year after the spin-off.

Al Arif (2015) showed that there are differences in the growth of financing after the spin-off. Using the Indonesian Islamic banking industry to analyze the impact of spin-offs on asset growth in Islamic banks, Poerwokoesoemo (2016) has study of conventional bank performance post spin-off in Sharia Islamic banking business units found that there are differences and increases in performance after the spin-off and decreasing NPL and ROA performance after the spin- off. Yuspin and

Wardiono (2017) discover that spin-off regulations in Indonesian Islamic Banks increase the efficiency and profitability, their agreement related to the Indonesian policy government that after 15 years Islamic units should be spinning to Islamic Banks. Furthermore, fully-fledged Islamic banks legally can take decisions more independently, faster, and advanced-oriented (Yuspin, Absori, and Nurwanti, 2020). Based on the explanation above, the hypothesis is:

$H_{4,5}$: Islamic bank have differences ROA and NPF before and after spin-off

On the other side Nur Rianto Al Arif *et al.,* (2017) differently state, that spin-off regulation should be re-evaluated and finding the other method because the effect of spin-off did not significant to bank asset and deposit funds except the parent Bank inject the capital. The updates research was done by Pernamasari (2020) on her research discuss that there are no significant differences performance after spin off. Al Arif *et al.,* (2020) mention that sharia bank unit after spin off could not achieve high development at least 50% from parent bank. He also stated the method to spin off need to evaluate. Based on previous study above, there are three alternatives to establish full fledge sharia bank, fist is merger, second is conversion, third is inject the capital of sharia bank unit until fulfill the requirement to establish as sharia bank.

Methods

This study adopts a quantitative approach to measure the financial performance of Islamic banks. The sample consists of data from Sharia bank performance over ten years following their establishment. We selected Islamic banks that have undergone acquisition and merger activities (details provided in the sample section). The focus of the article is on comparing the banks' performance before and after their establishment as Islamic banks, so the nearest year to the establishment date was selected for analysis. A longitudinal quantitative approach is employed to measure and compare the financial performance post-establishment. The quantitative methods used in this study include the Paired T-Test and the Wilcoxon test for non-normal data.

Data Research

The approach in the current research is to analyze the differences in the performance of Islamic banks after their establishment as full-fledged Islamic banks, using ten years of quarterly data post-establishment. The performance differences are classified into three groups: (1) banks established through pure spin-off, (2) those formed via mergers, and (3) those converted from conventional banks. The

classification of these three groups is based on the banks' establishment history, obtained from their respective websites. The data for the second analysis covers ten years after the banks' establishment as Islamic banks, from March 2010 to September 2020, using quarterly data.

Operational Definition

The definition of variables is:

1. Financing to Deposit Ratio (FDR): Used to predict liquidity of bank. FDR calculation = (Total Financing) / (Total Third Parties Fund) X 100%
2. Non-Performing Fund (NPF): Used to predict risk of financing. NPF calculation = (Amount Financing Problems) / (Total Financing) X 100%.
3. Return on Asset (ROA): Represents profitability of bank ROA calculation = (Interest Before Tax) / (Mean of Total Assets) X 100%
4. Capital Adequacy Ratio (CAR): Observes the capital adequacy owned by a bank to support the assets that contain or generate risk. CAR calculation = Capital / ATMR X 100%
5. Operating Expense Ratio (OER): Used to predict efficiency of bank operation. OER calculation = (Operational Expenses) / (Operational Income) X 100%

Sampling Technique

Purposive sampling is used in this study, selecting samples based on specific criteria. The sampling criteria are: first, Islamic banks established through spin-off, acquisition, or conversion methods; and second, banks that have completed quarterly financial statements for ten years after becoming Islamic banks.

To compare performance across multiple banks after their establishment as full-fledged Islamic banks, quarterly financial reports from March 2010 to September 2020 are utilized. Based on these criteria, six banks have been selected as the main sample for this study: BNI Syariah (BNIS), BJB Syariah (BJBS), Syariah BRI (BRIS), Syariah Bukopin (BKOPS), Bank Victoria Syariah (BVICS), and BCA Syariah (BCAS). Please refer to Table 1 for further details on the banks.

Table 1. Sample Used in this Study

Sample	Establishment Method	Year EStablish
BNI Syariah	Spin-off from windows conventional	2010
BJB Syariah	Spin-off from windows conventional	2010
Syariah BRI	Merger: BRI merger with Bank Jasa Arta, and develop Syariah BRI	2008
Syariah Bukopin	Merger: Bank Bukopin marger with PT Bank Persyarikatan Indonesia, and develop Syariah Bukopin	2008
Bank Victoria Syariah	Conversion from PT Bank Swaguna	2009
BCA Syariah	Conversion from PT Bank Utama Internasional	2010

Technique of Analysis

Normality Test

The normality test aims to determine whether a data distribution can be said to be normal or not (Santoso, 2003). Normally distributed data is a requirement for conducting a hypothesis test, so it is necessary to conduct a normality test. The normality test used is the Shapiro Wilk test, which aims to test the normality of panel data and is used for small sample sizes (Trinugroho *et al.*, 2021).

The decision-making guidelines in the Shapiro Wilk normality test are if the probability value is <0.05 then the data is not normally distributed. If the probability value is> 0.05 then the data is normally distributed (Santoso, 2003). After the normality test is carried out, the data is then processed using a paired two-sample difference test with the following provisions:

a) If the data is normally distributed, use the t-test (paired sample t-test).

b) If the data is not normally distributed, the Wilcoxon match pairs test (non-parametric test) is used.

Paired T-Test

The paired sample t-test is a statistical method widely used to analyze differences between two related groups, particularly in pre-post or before-and-after research designs. This test is applicable when the data is normally distributed,

allowing researchers to make valid inferences about the mean differences between the two conditions. The normality assumption is crucial, as it ensures the reliability of the t-test results. For instance, Budiman *et al.* (2022) conducted a normality test using the Shapiro-Wilk method prior to applying the paired sample t-test, confirming that their data met the normality requirement, which is essential for the validity of the test results. According to Widiyanto (2013) the paired sample t-test is one of the testing methods used to assess the effectiveness of treatment, marked by differences in the average before and after treatment. For the calculation process of the paired sample t-test, researchers use a computer program for statistical analysis, namely SPSS 22. The basis for making decisions to accept or reject H0 in the paired sample t-test is as follows:

a. Determine the level of significance (α) of 5% or 0.05

b. Determine the test criteria:

1. If t count> t table and probability (Asymp.Sig) <0.05, then H0 is rejected and H1 is accepted indicating that there is a significant difference.

2. If t count < t table and probability (Asymp.Sig) > 0.05, then H0 is accepted and H1 is rejected indicating that there is no significant difference.

Wilcoxon Match Pairs Test

The Wilcoxon difference test is a non-parametric statistical test used to compare the average of two related or related groups that have the same distribution and test data if it is ordinal. The Wilcoxon difference test is used to determine whether or not there is a difference in the average between two related sample groups (Sugiyono, 2007). According to Nasuha (2012), the Wilcoxon test is a refinement of the sign test. In addition, this study uses Wilcoxon analysis because the data is not normally distributed. For the calculation process of the Wilcoxon difference test, the researcher used a computer program for statistical analysis, namely SPSS 22.

The results of the Wilcoxon test were taken in the following ways:f

a. Determine the level of significance (α) of 5% or 0.05

b. Determine the testing criteria:

1. H0 is rejected if the probability value or Sig. (2-tailed) < 0.05, indicating that there is a significant difference.

2. H0 is accepted if the probability value Sig. (2-tailed) > 0.05, indicating that there is no significant difference.

Result and Discussions

Normality test is used before conducting data hypothesis testing. Normality test is conducted on each research variable which aims to test whether the data is normally distributed or not. Shapiro-Wilk normality test is used in this study because the amount of data is small or less than 50. The results of the normality test of Islamic Bank data in this study can be seen in table 2.

Table 2. Normality Test

		Shapiro-Wilk W test for normal data		
Variabel	Metode	Statistik	Df	Sig.
OER	Spin off	0,884	8	0,205
	Merger	0,901	8	0,294
	Conversion	0,914	8	0,381
FDR or Liquidity	Spin off	0,857	8	0,113
	Merger	0,856	8	0,110
	Conversion	0,903	8	0,309
CAR	Spin off	0,911	8	0,363
	Merger	0,969	8	0,886
	Conversion	0,841	8	0,077
ROA	Spin off	0,969	8	0,889
	Merger	0,976	8	0,940
	Conversion	0,835	8	0,067
NPF	Spin off	0,888	8	0,222
	Merger	0,882	8	0,195
	Conversion	0,593	8	0,000

The performance of Islamic banks is said to have met the normal assumption if the data meets the normality assumption with a significance value > 0.05. From the data above, the NPF for Conversion is stated to be abnormal because it is less than 0.05, so the test that will be used is the Wilcoxon Match Pairs Test, while normally distributed data uses the Paired T-Test.

Paired T-Test for Spin off Islamic Bank (BNI Syariah and BJB Syariah)

The Paired T-Test conducted in this study aims to determine whether the performance of Islamic Commercial Banks before and after the spin off by assessing

significant differences or not after they spin off. One of the assumptions of the related two-sample difference test that must be met is the normality test. Based on the normality test in Table 2, it can be obtained that the BOPO, NPF, FDR, ROA and CAR variables have a probability of > 0.05, so the data can be said to be normally distributed and using the Paired T-Test. The following are the results of the Two-Sample Difference Test conducted using the help of a computer program for statistical analysis SPSS 22, in table 3

Table 3. Paired T-Test of Islamic Bank performance with spin-off establishment method

Variable	Before and After		Significant	T	Hypothesis
	N	*Mean*			
OER	8	34,44	0,254	1,242	not Significant
FDR	8	-3,07	0,290	-1,146	not Significant
ROA	8	-2,27	0,232	-1,308	not Significant
CAR	8	3,46	0,149	1,623	not Significant
NPF	8	0,06	0,563	0,607	not Significant

The Operating Cost and Operating Income variables were analyzed using the Paired T-Test, showing a significance level of 0.254. The results showed a significance level of more than 0.05, which means that the initial hypothesis was accepted, indicating that there was no significant difference in the OER of Islamic Commercial Banks before and after the spin-off using the pure method. The Financing to Deposit Ratio variable was analyzed using the Paired T-Test, showing a significance level of 0.290. The results showed a significance level of more than 0.05, which means that the initial hypothesis was accepted, indicating that there was no significant difference in the FDR of Islamic Commercial Banks before and after the spin-off using the pure method.

The Capital Adequacy Ratio, was analyzed using the Paired T-Test, showing a significance level of 0.149. The results showed a significance level of more than 0.05, which means that the initial hypothesis was accepted, indicating that there was no significant difference in the CAR of Islamic Commercial Banks before and after the spin-off using the pure method. The return On Assets, was analyzed using the Paired T-Test, showing a significance level of 0.232. The results showed a significance level of more than 0.05, which means that the initial hypothesis was accepted, indicating

that there was no significant difference in the ROA of Islamic Commercial Banks before and after the spin-off using the pure method. The Non-Performing Financing variable was analyzed using the Paired T-Test, showing a significance level of 0.563. The results showed a significance level of more than 0.05, which means that the initial hypothesis was accepted, indicating that there was no significant difference in the NPF of Islamic Commercial Banks before and after the spin-off using the pure method.

Paired T-Test for Merger Islamic Bank (Syariah BRI and Syariah Bukopin)

Table 4. Paired T-Test of Islamic Bank performance with merger establishment method

Variable	Before and After		Significant	T	Hypothesis
	N	*Mean*			
OER	8	49,29	0,007	3,750	Significant
FDR	8	13,64	0,266	1,210	not Significant
CAR	8	31,06	0,000	6,491	Significant
ROA	8	-2,39	0,002	-4,866	Significant
NPF	8	8,30	0,094	1,933	not Significant

Based on table 4, the Operating Cost and Operating Income variables were analyzed using the Paired T-Test, showing a significance level of 0.007. The results showed a significance level of less than 0.05, which means that the initial hypothesis was rejected, indicating a significant difference in the OER of Islamic Commercial Banks before and after the merger. The increase in the level of operational performance efficiency seen from the efficiency ratio of the merged Sharia Commercial Bank is due to the streamlining of costs from several banks into one bank, many costs can be reduced, one of which is operational costs and including employee costs. Banks that merge will carry out efficiency both in operations and they now have many branches that have the potential to increase their income.

The Financing to Deposit Ratio variable was analyzed using the Paired T-Test, showing a significance level of 0.266. The results showed a significance level of more than 0.05, which means that the initial hypothesis was accepted, indicating no significant difference in the FDR of Islamic Commercial Banks before and after the

merger. The Capital Adequacy Ratio variable was analyzed using the Paired T-Test, showing a significance level of 0.000. The results showed a significance level of less than 0.05, which means that the initial hypothesis was rejected, indicating a significant difference in the CAR of Islamic Commercial Banks before and after the merger. Different CAR after merger and positive, indicating the existence of joint capital from the banks that merge. Merger is considered better because there is a combination of capital between banks so that it makes capital stronger and more.

The Return on Assets variable was analyzed using the Paired T-Test, showing a significance level of 0.002. The results show a significant level of less than 0.05, which means that the initial hypothesis is rejected, which shows a significant difference in the ROA of Islamic Commercial Banks before and after the merger. A healthy company merger will certainly result in increased profits. From the results above, it can be seen that the company's risk from both liquidity and bad debts has not changed much, while capital and efficiency have increased, so in other words, after the merger, by looking at the health ratio conditions (OER and CAR), it will result in increased profits. This positive ROA difference is the result of efficiency support and increased banking capital strength after the merger.

Meanwhile, the last variable, namely Non-Performing Financing, was analyzed using the Paired T-Test, showing a significance level of 0.094. The results show a significant level of more than 0.05, which means that the initial hypothesis is accepted, which shows no significant difference in the NPF of Islamic Commercial Banks before and after the merger. The conclusion of the difference test conducted on the five variables calculated at Islamic Commercial Banks with the merger method in this study shows that the fixed asset, BOPO, ROA, and CAR variables have significant differences. While for the NPF and FDR variables, there is no significant difference before and after the merger.

Paired T-Test for Conversion Islamic Bank (Bank Victoria Syariah and BCA Syariah)

The following are the results of the Paired T-Test which was carried out using the assistance of a computer program for statistical analysis SPSS 22.

Based on table 5, the OER variable was analyzed using the Paired T-Test, showing a significance level of 0.112. The results showed a significance level of more than 0.05, which means that the initial hypothesis was accepted, which shows no significant difference in the OER of Islamic Commercial Banks before and after conversion. The liquidity variable, Financing to Deposit Ratio, was analyzed using

the Paired T-Test, showing a significance level of 0.000. The results showed a significance level of less than 0.05, which means that the initial hypothesis was rejected, which shows a significant difference in the FDR of Islamic Commercial Banks before and after conversion. This liquidity indicates a positive variance, signifying a rise in financing. Augmenting financing is advantageous for banking, indicating that an increasing number of consumers are obtaining financing, hence enhancing the banking sector's role as a fund distributor.

Table 5. Paired T-Test of Islamic Commercial Bank Performance before and after conversion

Variable	Before and After		Significant	T	Hypothesis
	N	*Mean*			
OER	8	-20,13	0,112	-1,820	not Significant
FDR	8	39,82	0,000	11,598	Significant
CAR	8	-111,82	0,001	-5,874	Significant
ROA	8	1,33	0,020	2,990	Significant

The Capital Adequacy Ratio variable was analyzed using the Paired T-Test, showing a significance level of 0.001. The results showed a significance level of less than 0.05, which means that the initial hypothesis was rejected, which shows a significant difference in the CAR of Islamic Commercial Banks before and after conversion. But unfortunately, in this CAR experienced a decreasing average, this could cause by the motivation to do the conversion is to save the bank from bankruptcy. But unfortunately, CAR experienced a decreasing, this could cause by the motivation to do the conversion is to save the bank from bankruptcy. After 1 year of conversion CAR still needs to be considered because BI sets a minimum CAR limit of 8%, so the bank has enough capital to backup the risk. The profitability variable, Return on Assets, was analyzed using the Paired T-Test, showing a significance level of 0.020. The results show a significant level of less than 0.05, which means that the initial hypothesis is rejected, which shows a significant difference in the ROA of Islamic Commercial Banks before and after conversion. The rise in ROA is promising; yet, the average gain is minimal. When considered collectively, the significantly increased FDR, the persistently negative CAR, and the modest profit suggest that Islamic banks engaging in conversion face greater obstacles in enhancing their performance compared to other established techniques.

Table 6. Wilcoxon Test for NPF Conversion

NPF	Before and After
Z	-.169[b]
Asymp. Sig. (2-tailed)	.866

The last variable, namely Non-Performing Financing, was analyzed using the Wilcoxon Test, because normality NPF variables is <0.05. The result in table 6 showing a significance level of 0.866.

The results show a significant level of more than 0.05, which means that the initial hypothesis is accepted, which shows no significant difference in the NPF of Islamic Commercial Banks before and after conversion. The conclusion of the difference test conducted on the five variables calculated in Islamic Commercial Banks with the conversion method in this study shows that the FDR, ROA, and CAR variables have significant differences.

Conclusion

Based on the study results, not all Islamic banks show differences in performance variables after establishment. In the pure spin-off method, no significant differences were found in any variables. In the merger method, there are significant differences in the efficiency ratio, return on assets (ROA), and capital adequacy ratio (CAR) before and after the merger. For the conversion method, significant differences were observed in the financing ratio, ROA, and CAR after conversion to Islamic banks.

The results also show that banks established through mergers exhibit better CAR and operational efficiency ratio (OER) performance, with higher average scores compared to those established through conversion. However, in terms of the financing-to-deposit ratio (FDR), conversion shows better performance than mergers. Meanwhile, the pure spin-off method has little effect, as no significant differences in performance were detected.

The implications of this research for bankers and regulators are that they should carefully consider the type of establishment method. However, the most important factor is ensuring the sustainable development of the bank. Each method of establishment has its own challenges that need to be addressed. Islamic banks formed through mergers have strong capital and are better suited to meet depositor

needs. Mergers also provide a strong customer base, as both partner banks bring their clientele, resulting in higher financing. However, this comes with proportional liquidity risks.

For future research, it is suggested to explore other variables, such as asset growth and third-party funds.

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