Murabahah Financing, Musyarakah, Mudharabah, Istishna and Ijarah Against Sharia Banking Profit Sharing

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Abstract
In general, the principle of profit sharing in sharia banking can be done through murabahah, musyarakah, mudharabah, istishna dan ijarah contracts. The more profit sharing generated by Islamic banking, the better conditions of Islamic banking. The sample used and the data were obtained from 11 Islamic Banks in Indonesia for the period 2014-2018. Profit sharing is used as the dependent variable while murabahah, musyarakah, mudharabah, istishna, and ijarah financing are used as independent variables. The results of the research without resampling and with resampling show that murabahah, mudharabah, and istishna have a significant effect on profit sharing, and musyarakah and ijarah have no significant effect on profit sharing. Murabahah gives the most dominant influence on profit sharing.

1. Introduction

Sharia Banks have been legally published to the public since 1992, including with the promulgation of Law Number. 7 of 1992 concerning Banking. This law is then interpreted in various government decisions that open opportunities for banks to work on the principle of profit sharing or sharia. The development of Islamic banking so far is still showing developments that have not been satisfying, good network or capacity efforts, compared to conventional bank developments (Syafii, 2011).

For Law No. 21 of 2008, Islamic Ordinary Banks are banks that carry out their business based on sharia principles and in their appearance consist of Islamic Ordinary Banks and Sharia People's Financing Banks. On the other hand, the Sharia Efforts Section for Law Number. 21 of 2008 is part of the activities of the Conventional Ordinary Bank's head office which acts as the seed office of the office or division that carries out business activities based on sharia principles. That way an interpretation can be drawn in the usual way, an Islamic bank is a financial institution that carries out an intermediary function in collecting citizens' budgets and providing financing to citizens according to sharia principles (Rianto, 2017).

The rapid progress of Islamic banking certainly requires a sufficient human energy base and competence in aspects of Islamic banking. So that this development can be attempted in an efficient and optimal way, the energy base of people, especially salespeople who are the previous actors in Islamic Bank operations, is required to draft Islamic Banking (Harahap, 2010).

Few studies regarding financial sectors and Islamic banking were conducted in many countries such as Bangladesh (Chowdury et al., 2016; Suzuki and Uddin, 2014), Nigeria (Sapovadia, 2017 and Ezeh & Nkamnebe, 2019), Sudan (Ahmed, 2008), South Africa (Kholvadia, 2017), Middle East (Abdeldayem & Aldulaimi, 2022), and Indonesia (Masrizal et al., 2022; Mais & Ramadhanty, 2021; Apriwandi & Yusuf, 2021; Mais et al., 2021; Syamsiah & Wulandari, 2022; Prima, 2022). In general, the principle of profit sharing in Islamic Banking can be carried out in 4 (four) main contracts, namely Musyarakah, Mudharabah, Al Muzara'ah, and Al Musaqah. The principles most widely used are Musyarakah and Mudharabah, while Al Muzara'ah and Al Musaqah are used specifically for plantation financing or agricultural financing by several Islamic Banks. Musyarakah is a cooperation contract between two parties for a particular business in which each party contributes funds (charity or expertise) with an agreement that the benefits and risks will be shared according to the agreement (Syafii, 2011).

This research is to identify the effects of Murabahah, Musyarakah, Mudharabah, Istishna, and Ijarah financing with research examples on BRI Syariah, BNI Syariah, Bank Syariah Mandiri, BCA Syariah, Bank Muamalat, Bank Jabar Banten Syariah, Bank Panin Syariah, Bank Syariah Bukopin, Maybank Sharia, Bank Victoria Syariah and Bank Awan Syariah from 2014–2018.

2. Research Method

This study uses a quantitative approach, which is a form of scientific research that examines one problem, one problem from a phenomenon, and looks at possible links or relationships between variables in the problem set (Indrawan, 2014). In this study, the samples were 11 (eleven) Islamic banks in Indonesia and were a saturated sample consisting of BRI Syariah, BNI Syariah, Bank Syariah Mandiri, BCA Syariah, Bank Muamalat, Bank Jabar Banten Syariah, Bank Panin Syariah, Bank Syariah Bukopin, Maybank Syariah, Bank Victoria Syariah and Bank Mega Syariah from 2014 – 2018. A saturated sample according to Sugiyono (2019) is a sampling technique in which all members of the population are used as samples.

The data collection technique used in this study is a quantitative approach. Quantitative research data collection is an attempt by researchers to collect data that is numerical or non-numeric but can be quantified. These data are then processed using statistical work formulas (Indrawan, 2014). In this study, quantitative data is in the form of Murabahah, Musyarakah, Mudharabah, Ishtishna, and Ijarah financing which are secondary data obtained from the Annual Reports of 11 (eleven) Islamic Banks in Indonesia. The data analysis method uses WARPPLS Data Processing version 7, and the conditions for fulfilling WARPPLS Data Processing are Average path coefficient (APC), Average R-squared (ARS) and Average adjusted R-squared (AARS) with P-Value <0.05. In this study, the three things mentioned above have been fulfilled.

There are 5 (five) independent variables, namely Murabahah, Musyarakah, Mudharabah, Ishtishna, and Ijarah financing, and one dependent variable, namely Profit Sharing.

Table 1. Variable Operationalization

Variable	Definition	Indicator
Murabahah (X1)	Murabahah is a transaction of selling goods by stating the acquisition price and profit (margin) agreed by the seller and the buyer (Hery, 2018)	1. Buyer of Goods. 2. Price.
Musyarakah (X2)	Musyarakah is sharikah or syirkah or partnership, which is an alliance between two or more people (Hery, 2018)	1. Syirkah 2. Price
Mudharabah (X3)	Mudharabah is an investment transaction based on trust. Trust is the most important element in a mudharabah contract, where the owner of the funds trusts the fund manager (Hery, 2018).	1. Fund Owner 2. Fund Manager
Istishna (X4)	Istishna is a sale and purchase contract in the form of an order for the manufacture of certain goods, with certain criteria and conditions agreed upon between the buyer (buyer) and the seller (manufacturer) (Hery, 2018).	1. Buyer of Goods. 2. Price.

Ijarah (X5)	Ijarah is a contract for the transfer of use rights (benefits) for an item or service, within a certain time with payment of wages or rent (ujroh), without being followed by a transfer of ownership of the goods (Hery, 2018)	1. Tenants 2. Price
Bagi Hasil (Y)	Profit sharing is a system that includes procedures for sharing business results between providers of funds and fund managers (Rofiq, 2004).	1. Provider of Funds 2. Fund Manager

Effect of Murabaha financing on Profit Sharing

For a business, customers' values are important. Good treatment to customers make them satisfied (Pohan & Iswadi, 2021). Murabahah is a way of buying and selling that looks at customer numbers, by using an agreement between the bank and the customer. Business practices allow clients to solve financial problems when they have trouble buying something. In this case the Islamic bank buys the objects needed by the customer and then sells them to the customer which is related to the acquisition price plus the profit limit agreed between the Islamic bank and the customer. Continuing to be a large amount of murabahah financing will result in continuing to be a large amount of profit. Empirical facts from previous research regarding murabahah ties with results that are proven by Rachmawati & Darmaya (2018). Furthermore, the impact of this financing is the bank's ability to generate profits. Based on the results of theoretical research and empirical evidence, the hypothesis is formulated as follows.
H1: Murabahah financing influences profit sharing

Effect of Musyarakah financing on Profit Sharing

Musyarakah is a form of ordinary business partnership in which there is an allotment of profits in which two or more parties mix capital or resources in carrying out the business, with the profit-sharing ratio according to the share of responsibilities. Profits are divided for the agreement of friends, and losses are divided for the capital ratio. The musyarakah business is based on the willingness of the parties who work together to increase the number of inheritances owned jointly by combining all energy bases. An increase in musyarakah financing will increase the yield. Empirical facts that support it have been found by Rachmawati & Ningsih (2018). Based on these arguments, the hypothesis is arranged as follows.
H2: musyarakah financing influences profit sharing

Effect of Mudharabah financing on Profit Sharing

Mudharabah is a collaboration between 2 or more parties where the owner of the capital (shahibul benevolence) entrusts part of the capital to the manager (mudharib) with an early agreement. This form is the pressure of cooperation with the participation capital of hundreds of% of the owner's capital and the ability of the manager. Mudharabah financing is financing channeled by LKS to other parties for productive efforts. The time for the efforts, the rules for the method of returning the budget, and for the results, the source was determined by the agreement of the two torn parties (LKS and the entrepreneur). Mudharib can carry out various kinds of efforts that have been mutually agreed upon by the Shari'a, and LKS does not participate in industrial management or blueprints but still carries out guidance and supervision. An increase in mudharabah financing will increase the yield due. Research that supports the bond between the two has been proven by Rachmawati & Ningsih (2018). Based on these findings the research hypothesis is stated as follows.
H3: mudharabah financing influences profit sharing

The effect of Istishna financing on Profit Sharing

Istishna is a sale and purchase contract between consumers and producers who act as traders. Consumers charge producers to provide goods according to consumer desires and sell them at agreed prices. The payment method can be in the form of payment in advance, in installments, or

deferred for a certain duration. Banks can act as consumers or traders in the Istishna business. Supporting research is proven by (Dewi, 2018). The research hypothesis is stated as follows.
H4: istishna financing influences profit sharing

Effect of Ijarah Financing on Profit Sharing
Ijarah is a charter agreement between the owner and the lessee to get compensation for injury to the subject being leased. Ijarah Mutahiyah Bittamlik is a charter agreement for an effort between the owner of the object being leased and the lessee to accept damages on the object being leased for a certain period according to the charter agreement. Supporting research is proven by (Sari, 2018). The research hypothesis is stated as follows.
H5: Ijarah financing influences profit sharing

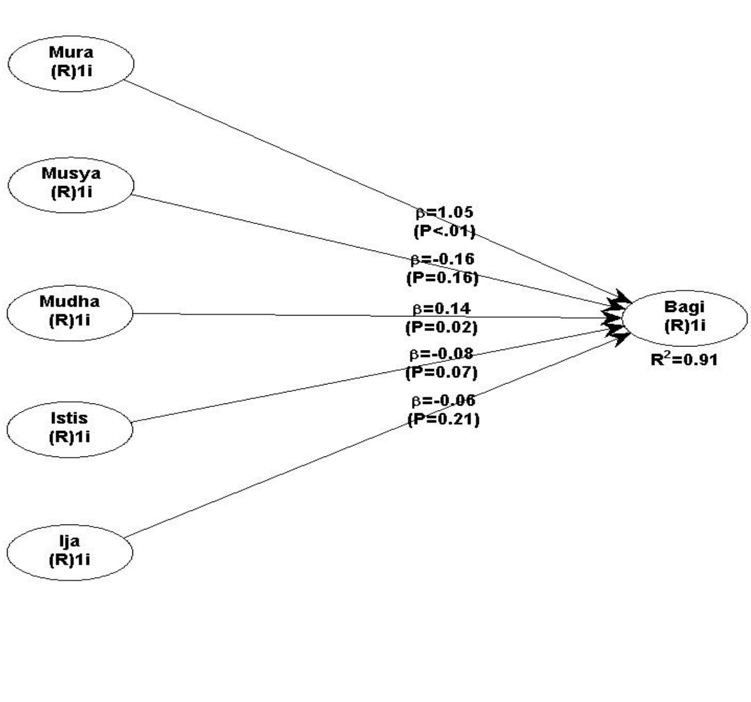
3. Results and Discussions

The descriptive analysis provides an overview or description of data seen from the average value (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness (distribution skewed) (Ghozali, 2018). Descriptive statistics aim to describe various data characteristics such as minimum, maximum, mean, and standard deviation.

Table 2. Descriptive Analysis Results

Variable	Minimum	Maximum	Mean	St. Deviasi
Murabahah	24.48	32.44	29.0004	1.8283
Musyarakah	0.00	31.73	27.8131	4.3011
Mudharabah	0.00	30.33	24.5635	7.2517
Istishna	0.00	27.37	11.9556	11.4966
Ijarah	0.00	31.24	18.5538	11.4873
Profit Sharing	17.39	29.51	27.1760	1.8740

The table above shows that Murabahah Financing has the lowest value of 24.48, the highest value of 32.44 with an average value of 29 and a standard deviation of 1.83. Musyarakah financing has the lowest value of 0, and the highest value of 31.73 with an average value of 27.81 and a standard deviation of 4.30. Mudharabah financing has the lowest value of 0, and the highest value of 30.33 with an average value of 24.56 and a standard deviation of 7.25. Istishna financing has the lowest value of 0, and the highest value of 27.37 with an average value of 11.95 and a standard deviation of 11.50. Ijarah financing has the lowest value of 0, and the highest value of 31.24 with an average value of 18.55 and a standard deviation of 11.49. Profit sharing has the lowest value of 17.39, and the highest value of 29.51 with an average value of 27.18 and a standard deviation of 1.87. Profit sharing has the lowest value of -8.52, and the highest value of 0 with an average value



of -4.70 and a standard deviation of 2.52. Then the following are the results of the test model before and after resampling, to provide information between model tests.

Figure 1. The Output of Data Processing for Results Before Resampling

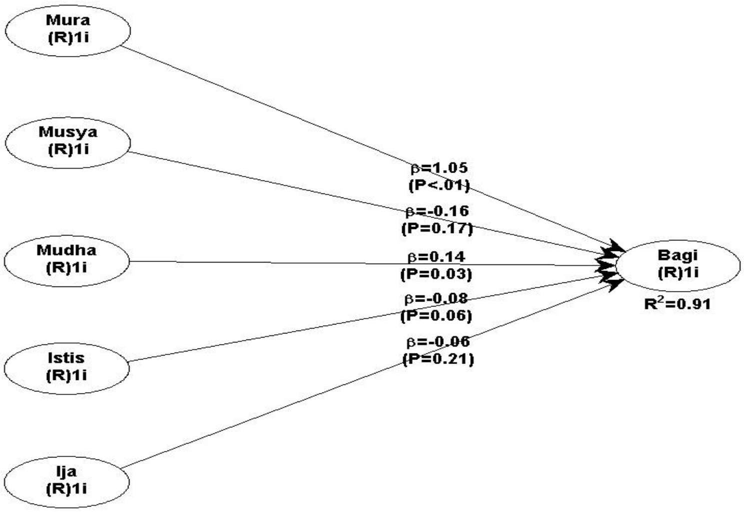


Figure 2. The Output of Data Processing for Result After Resampling with Bootstrapping 300

Based on Figure I and Figure II above, there are differences in the results of data processing before resampling and after resampling with bootstrapping 300 as follows:

Table 3. Before Resampling and After Resampling

Before Resampling	After Resampling
Musyarakah : β = 0,16 P. Value = 0,16	Musyarakah : β = 0,16 P. Value = 0,17
Mudharabah : β = 0,14 P. Value = 0,02	Mudharabah : β = 0,14 P. Value = 0,03
Istishna : β = 0,08 P. Value = 0,07	Istishna : β = 0,08 P. Value = 0,06

In carrying out a structural evaluation (inner model) which includes a model fit test (model fit) path coefficient and R^2. To assess the results of a model that is said to fit in the WarpPLS 7.0 program, it can be seen from the general results output. It can be seen in the fit indices and p-value models as presented in the following table:

Table 4. Model Fit and Quality Indices Before and After Resampling

Model fit and quality indices	Indeks	P-Value	Criteria	Information
Average path coefficient (APC)	0,299	P<0,001	P<0,05	Received
Average R-squared (ARS)	0,908	P<0,001	P<0,05	Received
Average adjusted R-squared (AARS)	0,899	P <0,001	P<0,05	Received
Average block VIF (AVIF)	1,718		≤ 5 dan idealnya ≤ 3,3	Received
Average full collinearity VIF (AFVIF)	5,340		≤ 5 dan idealnya ≤ 3,3	Rejected
Tenenhaus GoF (GoF)	0,953		small >= 0.1, medium >= 0.25, large >= 0.36	Large
Sympson's paradox ratio (SPR)	0,400		≥0,7 dan idealnya = 1	Rejected
R-squared contribution ratio (RSCR)	0,890		≥0,9 dan idealnya = 1	Rejected
Statistical suppression ratio (SSR)	1		> 0.7	Received
Nonlinear bivariate causality direction ratio (NLBCDR)	1		> 0.7	Received

From the picture above, based on the Results of Sharing Data Processing, the test results for this structural model were carried out by looking at the R-square which is a goodness-of-fit model test. The results show that the R-Square value is 0.908, meaning that the exogenous latent variables in this study can influence Profit Sharing by 90.8% in other words this research model is classified as strong, this is assessed from the value of the coefficient of determination R-Square 0 .70; 0.45; and 0.25 indicates a strong, moderate and weak model (Ghozali, 2018).

Q-Squared (usually also called Stoner-Geisser Coefficient). Q squared is used to assess the predictive validity or relevance of a set of predictor latent variables on the criterion variable. Q-Squared can be negative while the R-Squared value is always positive. Models with predictive validity must have a Q^2 value greater than zero. The results of the model estimation show good predictive validity, which is equal to 0.915 because it is above zero, which means that the model has predictive relevance.

For the VIF full collinearity value, it shows a value of > 5, the results are unacceptable (ideal value <3.3) which indicates that there is multicollinearity between the independent variables.

Table 5. Summary of Rule of Thumb Structural Model Evaluation

Criteria	Rule of Thumb
R-Square atau Adjusted R^2	$\leq$ 0.70, $\leq$ 0.45, and $\leq$ 0.25 indicates a strong, moderate, or weak model
Effect Size (f^2)	$\geq$ 0.02, $\geq$ 0.15, and $\geq$ 0.35 (small, medium, and large)
Q^2 *predictive relevance*	$Q^2 > 0$ shows the model has predictive relevance and if $Q^2 < 0$ shows that the model lacks predictive relevance
q^2 *predictive relevance*	> 0.02, > 0.15, and > 0.35 (small, moderate, and strong)
APC, ARS dan AARS	P-value $\leq$ 0.05
AVIF dan AFVIF	< 3.3, but a value < 5 is still acceptable
Goodness Tenenhaus	> 0.10, > 0.25, and > 0.36 (small, medium, and large)
SPR	Ideally = 1, but values > 0.7 are still acceptable
RSCR	Ideally = 1, but values > 0.7 are still acceptable
SSR	Must be > 0.7
NLBCDR	Must be > 0.7
Signifikansi (*two tailed)*	P-value 0.10 (significance level = 10%), P-value 0.05 (significance level = 5%), and P-value 0.01 (significance level = 1%)

Source: Ghozali, 2021

Hypothesis testing can be seen from the results of the Path Coefficient and P Values of the relationship between the independent variables and Profit Sharing as shown in the table below:

Table 6. Path Coefficient and P Values

Hypothesis	Variable Relations	Path Coefficient	P Values	Information
H1	Murabahah → Profit Sharing	1,050	<0.001	Proven hypothesis *
H2	Musyarakah → Profit Sharing	-0,157	0,157	The hypothesis is not proven
H3	Mudharabah → Profit Sharing	0,142	0,024	Proven hypothesis *
H4	Istishna → Profit Sharing	-0,084	0,066	Proven hypothesis **
H5	Ijarah → Profit Sharing	-0,061	0,206	Proven hypothesis

Information:
* Significant 0.05 level
** significant 0.10 level

Murabahah is a process of buying and selling goods where the original price and profit are known and agreed upon by both parties beforehand. Meanwhile, a Murabaha contract in Islamic banking can be interpreted as a type of contract that is often used to purchase products by a bank according to a customer's request and then sells them to the customer at a pre-agreed purchase price and profit. The results of the research without resampling and the results of the research with resampling have succeeded in proving that Murabahah has a significant effect on Profit Sharing. This study supports previous research conducted by Zaenudin (2014).

Musyarakah is a cooperation contract between capital owners who mix their capital to make a profit. In musyarakah, the owners of capital both provide capital to finance a particular business. Furthermore, the owners of capital can return the capital following the agreed profit sharing. The results of the research without resampling and the results of the research with resampling prove that Musyarakah has no significant effect on Profit Sharing. This research supports previous research conducted by Muklis & Fauziah (2015).

Mudharabah is a cooperation agreement between the provider of business funds and the fund manager to obtain business results by a mutually agreed ratio. The results of the research without resampling and the results of the research with resampling prove that Mudharabah has a significant effect on Profit Sharing. This research supports previous research conducted by Ira (2018).

Istishna is a sale and purchase contract in the form of an order for the manufacture of certain goods, with certain criteria and conditions agreed upon between the seller and the buyer. The results of the research without resampling and the results of the research with resampling prove that Istishna has a significant effect on Profit Sharing. This research supports previous research conducted by Dewi (2018).

Ijarah is a contract for the transfer of usufructuary rights (benefits) of an item or service for a certain time with payment of rent, without being followed by a transfer of ownership. The Ijarah contract requires the lessor to provide usable assets and gives the lessor the right to receive the lease. The results of the research without resampling and the results of the research with resampling prove that Ijarah has no significant effect on Profit Sharing. This research supports previous research conducted by Sari (2018).

4. Conclusions

In the discussion above it can be concluded. Research without resampling and with resampling, Murabahah has a significant effect on Profit Sharing. Research without resampling and with resampling, Musyarakah has no significant effect on Profit Sharing. Research without resampling and with resampling, Mudharabah has a significant effect on Profit Sharing. Research without resampling and with resampling, Istishna has a significant effect on Profit Sharing. Research without resampling and with Ijarah resampling has no significant effect on Profit Sharing. The limitations encountered in carrying out the research were that the sample data were obtained only from 11 Islamic banks. Then not all Islamic banks studied produce profit sharing according to the independent variables. Future research is expected to add to the independent variables by increasing the number of Islamic banks studied to find out the profit sharing of Islamic banks.

References

Ahmed, G, A. (2008). The Implication of Using Profit and Loss Sharing Modes of Finance in The Banking System, with A Particular Reference to Equity Participation (Partnership) Method in Sudan. *Humanomics*, *24*(3), 182-206. https://doi.org/10.1108/08288660810899359

Abdeldayem, M. & Aldulaimi, S. (2022). Developing an Islamic Crowdfunding Model: A New Innovative Mechanism to Finance SMEs in the Middle East. *International Journal of Organizational Analysis*. https://doi.org/10.1108/IJOA-02-2022-3159

Syafii, A. M. (2011). *Bank Syari'ah: dari Teori ke Praktik*. Gema Insani.

Apriwandi & Yusuf, P. S. (2021). Reconstruction of Murabahah Contract Schemes in Sharia Banking. *JFBA: Journal of Financial and Behavioural Accounting, 1*(1), 29–35. Retrieved from https://jurnal.ut.ac.id/index.php/jfba/article/view/1897

Chowdhury, M. A. F., Shoyeb, M., Akbar, C. & Islam, M. N. (2016). Risk Sharing Paradigm of Islamic Banks: Case of Bangladesh. *Advances in Islamic Finance, Marketing, and Management*, 103-130. https://doi.org/10.1108/978-1-78635-899-820161007

Dewi. (2018). *Pengaruh Pendapatan Istishna Paralel dan Beban Promosi Terhadap Laba Operasional PT. Bank Muamalat Indonesia Periode 2015 – 2017*.

Ezeh, P. C. & Nkamnebe, A. D. (2020). The Prospects of Islamic Banking in Southeast of Nigeria. *Journal of Islamic Marketing*, *11*(1), 251-267. https://doi.org/10.1108/JIMA-03-2016-0023

Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25* (9th ed.). Badan Penerbit-Undip.

Kholvadia, F. (2017). Islamic Banking in South Africa – Form Over Substance?. *Meditari Accountancy Research*, *25*(1), 65-81. https://doi.org/10.1108/MEDAR-02-2016-0030

Mais, R. G., & Ramadhanty, F. (2022). Factors Affecting the Level of Disclosure of Islamic Social Reporting (ISR) at Sharia Commercial Banks in Indonesia. *JFBA: Journal of Financial and Behavioural Accounting*, *1*(2), 12–24. https://doi.org/10.33830/jfba.v1i2.2424.2021

Mais, R. G., Maharani, D., & Prasetyo, A. (2021). Issuance Value, Issuance Rating and Life of Sharia Bond on Sharia Capital Market Reaction. *JFBA: Journal of Financial and Behavioural Accounting*, 1(1), 83–92. Retrieved from https://jurnal.ut.ac.id/index.php/jfba/article/view/2241

Masrizal, Sukmana, R., Fianto, B. A. & Gultom, R. Z. (2022), Does Economic Freedom Fosters Islamic Rural Banks Efficiency? Evidence from Indonesia. *International Journal of Productivity and Performance Management*. https://doi.org/10.1108/IJPPM-11-2021-0660

Syamsiyah, N. & Wulandari. (2022). Factors Affecting Dividend Policy in Financial Sector Companies in Indonesia: Panel Data Analysis. *JFBA: Journal of Financial and Behavioural Accounting, 2*(1), 35–45. https://doi.org/10.33830/jfba.v2i1.3642.2022

Pohan, E. S., & Iswadi, U. (2021). The Influence of Information Technology, Individual Performance, and Sales Volume on Increasing Profits in SMEs in Cilegon . *JFBA: Journal of Financial and Behavioural Accounting*, 1(1), 51–62. Retrieved from https://jurnal.ut.ac.id/index.php/jfba/article/view/1859

Prima, S. R. (2022). Financial Performance of Banten Province Before and During the Covid-19 Pandemic. *JFBA: Journal of Financial and Behavioural Accounting*, 2(1), 26–34. https://doi.org/10.33830/jfba.v2i1.2967.2022

Rachmawati, E. N. & Darmaya, W. (2018). Analisis Penetapan Margin Pada Pembiayaan Murabahah Dan Nisbah Bagi Hasil Pada Pembiayaan Mudharabah Di BMT Al-Ittihad PekanBaru. *SYARIKAT: Jurnal Rumpun Ekonomi Syariah, 1*(2), 76-89. https://doi.org/10.25299/syarikat.2018.vol1(2).3182

Rachmawati, L. & Ningsih, W. F. (2018). Analisis Faktor Yang Dipertimbangkan Dalam Penentuan Nisbah Bagi Hasil Pembiayaan Mudharabah dan Musyarakah Pada Bank BNI Syariah Cabang Jember. *Jurnal Relasi*, 14(2), 138-148. https://doi.org/10.31967/relasi.v14i2.268

Rianto, M. N. (2017). *Pengantar Ekonomi Syariah, Teori dan Praktik*. Pustaka Setia.

Sapovadia, V. (2017). Jaiz: The Birth of Non-Interest Banking in Nigeria. *Developing Africa's Financial Services*, 199-246. https://doi.org/10.1108/978-1-78714-186-520171010

Harahap, S., Sofyan, Wiroso & Yusuf, M. (2010). *Akuntansi Perbankan Syariah PSAK Syariah Baru*. LPFE Usakti.

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alphabet.

Suzuki, Y. & Uddin, S. M. S. (2014), Islamic Bank Rent: A Case Study of Islamic Banking in Bangladesh. *International Journal of Islamic and Middle Eastern Finance and Management*, *7*(2), 170-181. https://doi.org/10.1108/IMEFM-11-2013-0119