

EFFORTS TO INCREASE THE GROWTH OF ISLAMIC BANK FINANCING BY  
DIVERSIFYING THE RIGHT FINANCING TYPES

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| ARTICLE INFO  | ABSTRACT   |
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| <p><b>Article history:</b></p> <p>Received 31 January 2023</p> <p>Accepted 10 April 2023</p>  | <p><b>Purpose:</b> This study aims to find an effective formula in encouraging the growth of the three types of financing, equity-based financing, debt-based financing and lease-based financing.</p> <p><b>Theoretical Framework:</b> Some factors originating from both internal and external bank may affect bank in channeling its financing. The development of total Islamic bank financing is affected by microeconomic and macroeconomic factors. Several microeconomic factors, including non-performing financing (Nastiti &amp; Kasri, 2019), profitability (Murni et al., 2018; Nastiti &amp; Kasri, 2019), third party funds (Annisa &amp; Yaya, 2015; Arnan &amp; Kurniawasih, 2014; Destiana, 2016; Furqaini &amp; Yaya, 2016; Giannini, 2013; Ispad, 2019; Jamilah, 2016; Priyanto et al., 2016) and equivalent rate (Kiswanto, 2013; Kurniawanti &amp; Zulfikar, 2014; Pramono, 2013; Riyanto, 2016). While macroeconomic factors are economic growth (Anwar et al., 2020; Ayyubi et al., 2017; Hafizh et al., 2020), inflation (Mubarok et al., 2020; Nastiti &amp; Kasri, 2019), interest rates (Hafizh et al., 2020; Mubarok et al., 2020).</p>   |
| <p><b>Keywords:</b></p> <p>Equity-Based Financing;<br/>Debt-Based Financing;<br/>Lease-Based Financing;<br/>Macroeconomics;<br/>Microeconomics.</p> | <p><b>Design/Methodology/Approach:</b> This study employed a quantitative approach with data analysis methods error correction model and co-integration. The secondary data selected as the sample range from quarter four (2014) to quarter first (2022).</p> <p><b>Findings:</b> Overall the growth in Islamic bank financing is influenced by macroeconomic and microeconomic variables. From a macroeconomic perspective, equity-based financing is more influenced by economic growth than interest rates and inflation. Meanwhile, debt-based financing and lease-based financing are more influenced by interest rates than economic growth. From a microeconomic perspective, the growth of third-party funds always affects the three types of financing, while non-performing financing and the level of profit sharing only affect equity-based financing.</p> <p><b>Research, Practical &amp; Social Implications:</b> It is recommended that Islamic banks focus more on collecting third party funds in order to encourage financing growth. Suggestions for further research are that the time period is made in years and use a more comprehensive analysis method to see the two-way interaction between the existing research variables.</p> |



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**Originality/Value:** Economic growth and interest rates can be used as macroeconomic indicators in controlling the growth of the three types of Islamic bank financing. The high interest rate will encourage the growth of equity-based financing, but on the other hand it will slow down the amount of debt-based financing. Meanwhile, microeconomic indicators such as the growth of third party funds are the determinants in encouraging the growth of the three types of financing, in addition to non-performing financing and the equivalent rate.

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## ESFORÇOS PARA AUMENTAR O CRESCIMENTO DO FINANCIAMENTO BANCÁRIO ISLÂMICO, DIVERSIFICANDO OS TIPOS DE FINANCIAMENTO CORRETOS

### RESUMO

**Objetivo:** Este estudo visa encontrar uma fórmula eficaz para incentivar o crescimento dos três tipos de financiamento, financiamento baseado em ações, financiamento baseado em dívida e financiamento baseado em arrendamento.

**Referencial Teórico:** Alguns fatores originários tanto do banco interno quanto externo podem afetar o banco na canalização de seu financiamento. O desenvolvimento do financiamento bancário islâmico total é afetado por fatores microeconômicos e macroeconômicos. Vários fatores microeconômicos, incluindo financiamento inadimplente (Nastiti & Kasri, 2019), lucratividade (Murni et al., 2018; Nastiti & Kasri, 2019), fundos de terceiros (Annisa & Yaya, 2015; Arnan & Kurniawasih, 2014; Destiana, 2016; Furqaini & Yaya, 2016; Giannini, 2013; Ispad, 2019; Jamilah, 2016; Priyanto et al., 2016) e taxa equivalente (Kiswanto, 2013; Kurniawanti & Zulfikar, 2014; Pramono, 2013; Riyanto, 2016). Enquanto os fatores macroeconômicos são crescimento econômico (Anwar et al., 2020; Ayyubi et al., 2017; Hafizh et al., 2020), inflação (Mubarok et al., 2020; Nastiti & Kasri, 2019), taxas de juros (Hafizh et al., 2020; al., 2020; Mubarok et al., 2020).

**Desenho/Metodologia/Abordagem:** Este estudo empregou uma abordagem quantitativa com métodos de análise de dados, modelo de correção de erros e co-integração. Os dados secundários selecionados como amostra variam do quarto trimestre (2014) ao primeiro trimestre (2022).

**Resultados:** Em geral, o crescimento do financiamento bancário islâmico é influenciado por variáveis macroeconômicas e microeconômicas. Do ponto de vista macroeconômico, o financiamento baseado em ações é mais influenciado pelo crescimento econômico do que pelas taxas de juros e pela inflação. Enquanto isso, o financiamento baseado em dívida e o financiamento baseado em leasing são mais influenciados pelas taxas de juros do que pelo crescimento econômico. Do ponto de vista microeconômico, o crescimento dos recursos de terceiros sempre afeta os três tipos de financiamento, enquanto o non-performing finance e o nível de participação nos resultados afetam apenas o financiamento baseado em ações.

**Implicações de pesquisa, práticas e sociais:** Recomenda-se que os bancos islâmicos se concentrem mais na coleta de fundos de terceiros para incentivar o crescimento do financiamento. Sugestões para pesquisas futuras são que o período de tempo seja feito em anos e use um método de análise mais abrangente para ver a interação bidirecional entre as variáveis de pesquisa existentes.

**Originalidade/Valor:** O crescimento econômico e as taxas de juros podem ser usados como indicadores macroeconômicos no controle do crescimento dos três tipos de financiamento bancário islâmico. A alta taxa de juros estimulará o crescimento do financiamento baseado em ações, mas, por outro lado, diminuirá o montante do financiamento baseado em dívida. Já os indicadores microeconômicos, como o crescimento dos recursos de terceiros, são os determinantes para estimular o crescimento das três modalidades de financiamento, além da inadimplência e da taxa equivalente.

**Palavras-chave:** Financiamento Baseado em Capital, Financiamento Baseado em Dívida, Financiamento Baseado em Leasing, Macroeconomia, Microeconomia.

## ESFUERZOS PARA AUMENTAR EL CRECIMIENTO DEL FINANCIAMIENTO DEL BANCO ISLÂMICO MEDIANTE LA DIVERSIFICACIÓN DE LOS TIPOS DE FINANCIAMIENTO ADECUADOS

### RESUMEN

**Propósito:** Este estudio tiene como objetivo encontrar una fórmula efectiva para fomentar el crecimiento de los tres tipos de financiación, financiación basado en acciones, financiación basado en deuda y financiación basado en arrendamiento.

**Marco teórico:** Algunos factores que se originan tanto en el banco interno como externo pueden afectar al banco en la canalización de su financiamiento. El desarrollo de la financiación bancaria islámica total se ve afectado por factores microeconómicos y macroeconómicos. Varios factores microeconómicos, incluido el financiamiento improductivo (Nastiti & Kasri, 2019), la rentabilidad (Murni et al., 2018; Nastiti & Kasri, 2019), fondos de terceros (Annisa & Yaya, 2015; Arnan & Kurniawasih, 2014; Destiana, 2016; Furqaini & Yaya, 2016; Giannini, 2013; Ispad, 2019; Jamilah, 2016; Priyanto et al., 2016) y tasa equivalente (Kiswanto, 2013; Kurniawati & Zulfikar, 2014; Pramono, 2013; Riyanto, 2016). Mientras que los factores macroeconómicos son el crecimiento económico (Anwar et al., 2020; Ayyubi et al., 2017; Hafizh et al., 2020), la inflación (Mubarok et al., 2020; Nastiti & Kasri, 2019), las tasas de interés (Hafizh et al., 2020; Mubarok et al., 2020).

**Diseño/Metodología/Enfoque:** Este estudio empleó un enfoque cuantitativo con métodos de análisis de datos, modelo de corrección de errores y cointegración. Los datos secundarios seleccionados como muestra van desde el cuarto trimestre (2014) hasta el primer trimestre (2022).

**Conclusiones:** En general, el crecimiento de la financiación de los bancos islámicos está influido por variables macroeconómicas y microeconómicas. Desde una perspectiva macroeconómica, el financiamiento basado en acciones está más influenciado por el crecimiento económico que por las tasas de interés y la inflación. Mientras tanto, el financiamiento basado en deuda y el financiamiento basado en arrendamiento están más influenciados por las tasas de interés que por el crecimiento económico. Desde una perspectiva microeconómica, el crecimiento de los fondos de terceros siempre afecta a los tres tipos de financiación, mientras que la morosidad y el nivel de participación en los beneficios sólo afectan a la financiación basada en acciones.

**Implicaciones de investigación, prácticas y sociales:** se recomienda que los bancos islámicos se centren más en recaudar fondos de terceros para fomentar el crecimiento financiero. Las sugerencias para futuras investigaciones son que el período de tiempo se haga en años y utilice un método de análisis más completo para ver la interacción bidireccional entre las variables de investigación existentes.

**Originalidad/Valor:** El crecimiento económico y las tasas de interés se pueden utilizar como indicadores macroeconómicos para controlar el crecimiento de los tres tipos de financiación bancaria islámica. La tasa de interés alta alentará el crecimiento de la financiación basada en acciones, pero por otro lado ralentizará la cantidad de financiación basada en deuda. Por su parte, indicadores microeconómicos como el crecimiento de los fondos de terceros son los determinantes para incentivar el crecimiento de los tres tipos de financiación, además de la morosidad y la tasa equivalente.

**Palabras clave:** Financiamiento Basado en Capital, Financiamiento Basado en Deuda, Financiamiento Basado en Arrendamiento, Macroeconomía, Microeconomía.

## INTRODUCTION

Banking industry plays a substantial role in the economy of a nation. As a part of national banking industry, Islamic banks also contribute significantly to the Indonesian economy, as they truly encourage the economic growth (Anwar et al., 2020; Hachicha & Ben Amar, 2015; Riyanto, 2016). Through financing channeled by Islamic banks, the problem of business capital needs can be resolved, especially among micro, small and medium enterprises (Ledhem & Moussaoui, 2021; Najihah & Permatasari, 2021; Rokhlinasari & Widagdo, 2019). Islamic bank financing is significant in encouraging the small people economy by through job creation reducing unemployment (Amelia & Hardini, 2017). Financing disbursed by Islamic banks has a greater impact than conventional bank loans in reducing poverty (Tohirin & Husaini, 2019). In addition, Islamic bank financing also plays an important role in increasing investment efficiency (Guizani & Ajmi, 2021).

Based on purpose, there are four classification of Islamic financing such as: financing with the principle of profit sharing, leasing, buying and selling, and financing with

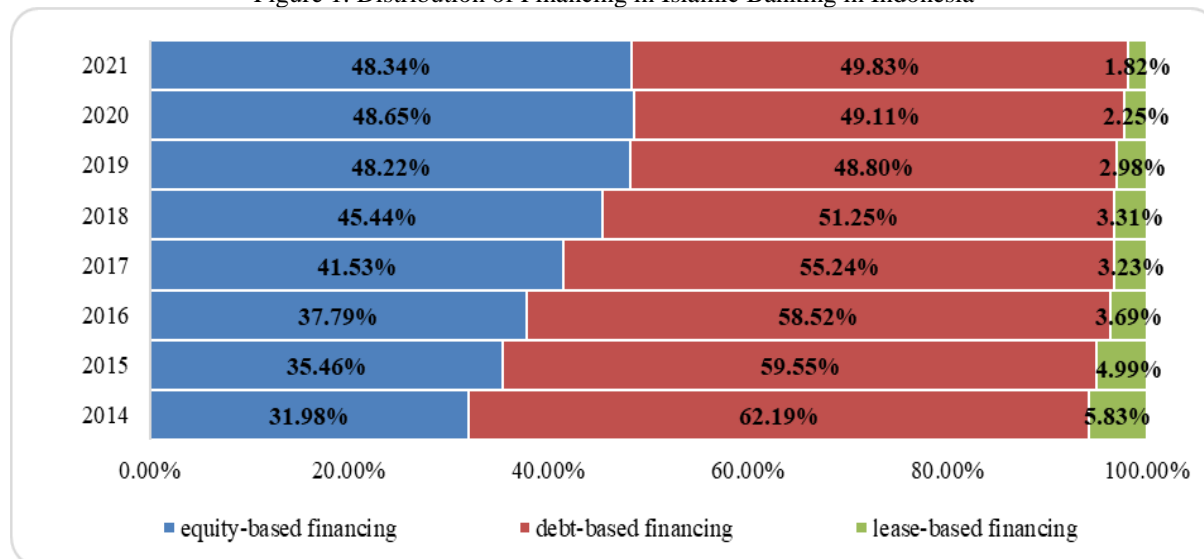
complementary contracts (Karim, 2016). Besides, the principles of profit-sharing (equity-based financing), sale and purchase (debt-based financing), and lease-based financing are currently implemented by Islamic banks in Indonesia.

Besides being differentiators from conventional banks through its two contracts (mudharabah and musyarakah), equity-based financing (profit sharing) has been the hallmark of Islamic banks. Financing based on profit-sharing principles should dominate compared to other types of Islamic banks' financing, as the profit-sharing system drives more productive businesses, so as to create new jobs (Giannini, 2013). This system has been believed to successfully gain national economic growth (Chowdhury et al., 2018) as well as give impacts on industrial development in encouraging industrious business (Bougatef et al., 2020).

Nevertheless, some obstacles are still faced in handling profit-sharing financing, including high investment risk, difficulty in selecting the right partner, demand from customers with low creditworthiness, and deficiency of capital security (Abdul-Rahman & Nor, 2016; Habibi & Rusgianto, 2021). This emphasizes the Islamic banks to put on the high return and high risk principle much better than non-islamic banks.

Alternatively, murabahah financing (debt-based financing) considered to not reflect the Islamic bank characteristic leads and contributes significantly to the Indonesian Islamic bank development (Pramono, 2013). The same cases are observed in Malaysia; Non-profit and loss sharing-based financing (debt-based financing and lease-based financing) are more desirable than profit and loss-based financing (equity-based financing) having many boundaries equated to debt-based financing (Mohd Nor & Ismail, 2020). Although debt-based financing still dominates the financing portfolio of Islamic banks, equity-based financing is slowly starting to shift its dominance (Habibi & Rusgianto, 2021).

Figure 1. Distribution of Financing in Islamic Banking in Indonesia



Source: Financial Services Authority (2014-2021)

Figure 1 shows that, initially, the percentage of debt-based financing was much larger, but gradually the percentage of equity-based financing began to balance. The contradictions that occurred in the early period of the existence of financing distribution in the Islamic banking industry in Indonesia began to lead to the characteristics of Islamic banks that put forward the profit and loss sharing principle. Changes in the circulation pattern of equity-based financing are of course a particular concern. Why did it happen? What factors cause this to happen? What macroeconomic and microeconomic indicators influence it?

## LITERATURE REVIEW

Some factors originating from both internal and external bank may affect bank in channeling its financing. Several ways to identify those factors include both total financing disbursed and financing by type as has been done by previous researchers.

According to several previous studies, the development of total Islamic bank financing is affected by microeconomic and macroeconomic factors. Several microeconomic factors, including non-performing financing (Nastiti & Kasri, 2019), operational efficiency (Nastiti & Kasri, 2019), liquidity (Murni et al., 2018; Nastiti & Kasri, 2019), and profitability (Murni et al., 2018; Nastiti & Kasri, 2019). While macroeconomic factors that affect financing growth include: economic growth (Anwar et al., 2020; Ayyubi et al., 2017; Hafizh et al., 2020), inflation (Mubarok et al., 2020; Nastiti & Kasri, 2019), interest rates (Hafizh et al., 2020; Mubarok et al., 2020), the composite stock price index (Hafizh et al., 2020), and exchange rates (Mubarok et al., 2020).



The microeconomic and macroeconomic factors that affect the growth of equity-based financing include: third party funds (Annisa & Yaya, 2015; Arnan & Kurniawasih, 2014; Destiana, 2016; Furqaini & Yaya, 2016; Giannini, 2013; Ispad, 2019; Jamilah, 2016; Priyanto et al., 2016), mudharabah deposits (Kiswanto, 2013; Pramono, 2013; Riyanto, 2016), non-performing financing (Annisa & Yaya, 2015; Arnan & Kurniawasih, 2014; Destiana, 2016; Ispad, 2019; Jamilah, 2016; Kalkarina et al., 2016; Kurniawati & Zulfikar, 2014; Murni et al., 2018; Nastiti & Kasri, 2019; Riyanto, 2016), equivalent rate (Kiswanto, 2013; Kurniawati & Zulfikar, 2014; Pramono, 2013; Riyanto, 2016), operational efficiency (Jamilah, 2016; Nastiti & Kasri, 2019), liquidity (Furqaini & Yaya, 2016; Giannini, 2013; Jamilah, 2016; Ningsih, 2017; Priyanto et al., 2016; Syu'la et al., 2021), economic growth (Hafizh et al., 2020), inflation (Mubarok et al., 2020; Priyanto et al., 2016), and interest rates (Hafizh et al., 2020; Mubarok et al., 2020; Priyanto et al., 2016).

Debt-based financing according to several previous studies is influenced by third party funds (Azka & Wibowo, 2018; Dwijayanty, 2018; Nurrahma, 2016; Yanis, 2015), non-performing financing (Dwijayanty, 2018; Nurrahma, 2016), margin (Azka & Wibowo, 2018), operational efficiency (Dwijayanty, 2018), liquidity (Dwijayanty, 2018; Rahmawati, 2017), and inflation (Azka & Wibowo, 2018). Meanwhile, lease-based financing is influenced by third party funds, profitability and liquidity (Gunanto et al., 2018).

Earlier studies have exposed the conflicting findings on the factors affecting the ups and downs of Islamic banks' financing growth. According to Destiana (2016), Ispad (2019), Jamilah (2016), and Syu'la et al. (2021), financing growth is positively affected by third party funds' growth. On the other hand, Priyanto et al. (2016) evidenced a contrast discovery. In equity-based financing, non-performing financing has negative effect, as found by Annisa & Yaya (2015), Furqaini & Yaya (2016), Ispad (2019), and Priyanto et al. (2016). Meanwhile, according to Destiana (2016), the growth of equity-based financing is affected positively by non-performing financing.

Third party funds collected by Islamic banks including deposits, savings and demand deposits must be channeled by banks in the form of financing, considering the main obligations of Islamic banks as intermediary institutions. The more third party funds join Islamic banks, the higher the financing that can be channeled. Annisa & Yaya, (2015), Arnan & Kurniawasih (2014), Destiana (2016), Furqaini & Yaya (2016), Ispad (2019), and Kalkarina et al. (2016) revealed that the third party funds' growth will encourage the growth of equity-based financing. Meanwhile, Azka & Wibowo (2018), Dwijayanty (2018), and Yanis (2015) that the growth of

third party funds will encourage the growth of debt-based financing. Based on these findings the first hypothesis proposed is:

H<sub>1a</sub>: third party funds positively and significantly effect on total financing.

H<sub>1b</sub>: third party funds positively and significantly effect on equity-based financing.

H<sub>1c</sub>: third party funds positively and significantly effect on debt-based financing.

H<sub>1d</sub>: third party funds positively and significantly effect on lease-based financing.

The Islamic bank productivity identified by return on assets indicates the bank's ability to generate profits. The high profits obtained by Islamic banks will encourage Islamic banks to expand through financing. Giannini (2013), Ningsih (2017), Syu'la et al. (2021), and Yanis (2015) revealed that return on assets effects the financing growth positively. The second hypothesis proposed is:

H<sub>2</sub>: profitability effects on total financing positively and significantly.

Profit sharing refers to a covenant between the fund owner and manager carried out at the commencement of the contract concerning the quantity of each profit sharing portion will be received. The profit sharing rate refers to the profit sharing amount which fund owners and fund managers get in a particular covenant (Rahmawati, 2017). In addition, according to Kurniawati & Zulfikar (2014) the level of profit sharing is an important factor in equity-based financing (mudharabah and musyarakah) inclining to be risky associated to other kinds of financing, as the revenues attained by Islamic banks are uncertain. Annisa & Yaya (2015), Giannini (2013), Kiswanto (2013), and Kurniawati & Zulfikar (2014) reported that the higher the profit-sharing rate (as measured by the equivalent rate) will shoot Islamic banks in distributing profit-sharing-based financing. In addition, Azka & Wibowo (2018) also revealed that the high margin (measured by the equivalent rate) of murabahah financing (debt-based financing) will encourage high growth of debt-based financing. On this basis the third hypothesis proposed is:

H<sub>3a</sub>: Equivalent rate equity-based financing effects on equity-based financing negatively and significantly.

H<sub>3b</sub>: Equivalent rate debt-based financing effect on debt-based financing negatively and significantly.

H<sub>3c</sub>: Equivalent rate lease-based financing effects on lease-based financing negatively and significantly.

Non-performing financing refers to a loan whose payment does not meet the specified lowest responsibilities so that repaying the credit is a problem (Hadiyati, 2013). Non-

performing financing represents the cost control level and bank financing policies (Kalkarina et al., 2016). Non-performing financing refers to a risk that must be tolerated by Islamic banks in distributing financing. The high level of non-performing financing shows the high credit risk borne by Islamic banks, so Islamic banks must reduce the amount of financing disbursed (Annisa & Yaya, 2015; Furqaini & Yaya, 2016; Ispad, 2019; Nugraheni & Alimin, 2020; Riyanto, 2016). The fourth hypothesis proposed is:

H<sub>4a</sub>: Non-performing financing effects on total financing negatively and significantly.

H<sub>4b</sub>: Non-performing financing of equity-based financing effects on equity-based financing negatively and significantly.

H<sub>4c</sub>: Non-performing financing of debt-based financing effects on debt-based financing negatively and significantly.

H<sub>4d</sub>: Non-performing financing of lease-based financing effects on lease-based financing negatively and significantly.

The size of a country's economic growth indicates an increase in production activity in that country. The high production activity will encourage the need for business capital both in the long and short term. Fulfillment of business capital needs can be met by financing, one of which is from Islamic banks. It indicates that the increase of country's economic growth correlates positively to the increase number of financing. Anwar et al. (2020), Ayyubi et al. (2017), and Hafizh et al. (2020) said the economic growth impacts on financing growth positively. The fifth hypothesis proposed is:

H<sub>5a</sub>: Economic growth effects on total financing positively and significantly.

H<sub>5b</sub>: Economic growth effects on equity-based financing positively and significantly.

H<sub>5c</sub>: Economic growth effects on debt-based financing positively and significantly.

H<sub>5d</sub>: Economic growth effects on lease-based financing positively and significantly.

Inflation indirectly affects financing growth. The fluctuations in inflation shown by the prices of commodities and services have contributed to a reduction in people's purchasing power, which in turn has reduced the demand for financing. As one of the macroeconomic indicators, inflation becomes the government's reference in the monetary policy-making process. The high rate of inflation requires the government to increase interest rates which have an impact on increasing financing prices in all banking segment (Islamic and Conventional bank) (Mubarok et al., 2020). Indirectly, inflation will encourage a slowdown in customer demand for financing as revealed by Azka & Wibowo (2018), Mubarok et al. (2020), Nastiti &



Kasri (2019), and Priyanto et al. (2016) that inflation positively and significantly affect profit sharing financing. The sixth hypothesis proposed is:

H<sub>6a</sub>: Inflation effects on total financing negatively and significantly.

H<sub>6b</sub>: Inflation effects on equity-based financing negatively and significantly.

H<sub>6c</sub>: Inflation effects on debt-based financing negatively and significantly.

H<sub>6d</sub>: Inflation effects on lease-based financing negatively and significantly.

The bank interest rate refers to the worth level which have to be paid as a consequence of the exchange of rupiah now and in the future (Elkamiliati & Ibrahim, 2014). An increase in interest rates will burden the banking world to pay interest and obligations which will ultimately reduce banking profits. Islamic finance positively responds to innovation in tangible output. In addition, the provision of Islamic bank financing tends to be affected by the price level shocks. Immediately, Islamic financing is negatively affected by positive interest rate shocks, contradicting that Islamic bank maneuvers are protected from interest rate fluctuations. Undeniably, the Islamic banks' sensitivity is to fluctuations in interest rates and their slow response to price level shocks (H. Ibrahim & Sufian, 2014). But on the other hand, the increase in interest rates, namely the application for financing in Islamic banks by customers is expected to increase along with the increase in loan interest at conventional banks or commercial banks, which means providing benefits for Islamic banks (Elkamiliati & Ibrahim, 2014). Hal ini mengindikasikan bahwa kenaikan suku bunga akan mendorong pertumbuhan pembiayaan pada bank syariah (Hafizh et al., 2020; Mubarak et al., 2020). On this basis the seventh hypothesis proposed is:

H<sub>7a</sub>: Interest rates effect on total financing positively and significantly.

H<sub>7b</sub>: Interest rates effect on equity-based financing positively and significantly.

H<sub>7c</sub>: Interest rates effect on debt-based financing positively and significantly.

H<sub>7d</sub>: Interest rates effect on lease-based financing positively and significantly.

## MATERIAL AND METHODOLOGY

Factors affecting the growth of financing in the Indonesia Islamic banking industry are the major concerns of this research. To gather the data, purposive sampling technique was employed by selecting particular sample subjects on needs. The sampling criteria covered the latest data considered more precise than the preceding ones, including the suitability of relevant data (the fourth quarter 2014 - the first quarter 2022). The data were attained from the Islamic

banking statistics issued by the Central Statistics Agency (BPS), Bank Indonesia (BI), and the Financial Services Authority (OJK).

In this study, The dependent variables cover financing (total financing (FIN), equity-based financing (EBF), debt-based financing (DBF), lease-based financing (LBF)) at Islamic Commercial Banks (BUS) and Sharia Business Units (UUS) in Indonesia as. Meanwhile, third party funds (DPK), return on assets (ROA), equivalent rate (ER), non-performing financing (NPF), economic growth (EG), inflation (INF) and interest rates interest (RATE) are the independent ones.

Co-Integration and Error Correction Model (ECM) have been employed as the analytical technique. These techniques are usually used for time series data having potential for spurious regression. These are simultaneously advantageous in recognizing both the long-term and short-term effects of independent variable on dependent variable. They are also able to scrutinize the model steadiness projected in a study. Precisely, Co-Integration is utilized to investigate, in the long term, whether there is a reliable effect of the independent variable on the dependent variable. Meanwhile, ECM is employed to recognize short-term performance. The second analysis will portray what variables are to be indicators particularly in heartening approachable financing growth in the short term and reliable in the long term.

The short-term and long-term equation model employed is the two-step Engel-Granger (EG) ECM model (Engle & Granger, 1987). The short-term regression model estimations are formulated written in the following equations (1-4):

$$D(\ln FIN_t) = \alpha_0 + \alpha_1 D(\ln TPF_t) + \alpha_2 D(ROA_t) + \alpha_3 D(NPF_t) + \alpha_4 D(EG_t) + \alpha_5 D(INF_t) + \alpha_6 D(RATE_t) + \alpha_7 EC\_FIN_t \dots \dots \dots (1)$$

$$D(\ln EBF_t) = \beta_0 + \beta_1 D(\ln TPF_t) + \beta_2 D(ER\_EBF_t) + \beta_3 D(NPF\_EBF_t) + \beta_4 D(EG_t) + \beta_5 D(INF_t) + \beta_6 D(RATE_t) + \beta_7 EC\_EBF_t \dots \dots \dots (2)$$

$$D(\ln DBF_t) = \gamma_0 + \gamma_1 D(\ln TPF_t) + \gamma_2 D(ER\_DBF_t) + \gamma_3 D(NPF\_DBF_t) + \gamma_4 D(EG_t) + \gamma_5 D(INF_t) + \gamma_6 D(RATE_t) + \gamma_7 EC\_DBF_t \dots \dots \dots (3)$$

$$D(\ln LBF_t) = \delta_0 + \delta_1 D(\ln TPF_t) + \delta_2 D(ER\_LBF_t) + \delta_3 D(NPF\_LBF_t) + \delta_4 D(EG_t) + \delta_5 D(INF_t) + \delta_6 D(RATE_t) + \delta_7 EC\_LBF_t \dots \dots \dots (4)$$

In addition, the long-term regression model estimations are formulated in equation (5-8) as follows:

$$\text{LnFIN}_t = \alpha_0 + \alpha_1 \text{LnTPF}_t + \alpha_2 \text{ROA}_t + \alpha_3 \text{NPF}_t + \alpha_4 \text{EG}_t + \alpha_5 \text{INF}_t + \alpha_6 \text{RATE}_t \dots\dots\dots (5)$$

$$\text{LnEBF}_t = \beta_0 + \beta_1 \text{LnTPF}_t + \beta_2 \text{ER\_EBF}_t + \beta_3 \text{NPF\_EBF}_t + \beta_4 \text{EG}_t + \beta_5 \text{INF}_t + \beta_6 \text{RATE}_t \dots\dots (6)$$

$$\text{LnDBF}_t = \gamma_0 + \gamma_1 \text{LnTPF}_t + \gamma_2 \text{ER\_DBF}_t + \gamma_3 \text{NPF\_DBF}_t + \gamma_4 \text{EG}_t + \gamma_5 \text{INF}_t + \gamma_6 \text{RATE}_t \dots\dots (7)$$

$$\text{LnLBF}_t = \delta_0 + \delta_1 \text{LnTPF}_t + \delta_2 \text{ER\_LBF}_t + \delta_3 \text{NPF\_LBF}_t + \delta_4 \text{EG}_t + \delta_5 \text{INF}_t + \delta_6 \text{RATE}_t \dots\dots (8)$$

Widarjono (2017) explained three steps to be taken in employing the Co-Integration and ECM methods: (1) stationarity test, (2) cointegration test and (3) ECM model estimation. The stationarity test aims to see the similarity of the stationarity levels of all research variables, which in this study used the unit root test with the Phillips-Perron (PP) method. Meanwhile, cointegration test aims to decide the existence of long-term equilibrium connection between research variables using the Engel-Granger Cointegration Test (EG) method. Last, the ECM model approximation was employed to investigate the short-term effect of the independent on the dependent variable, and to detect how fast it takes to acquire the equilibrium value.

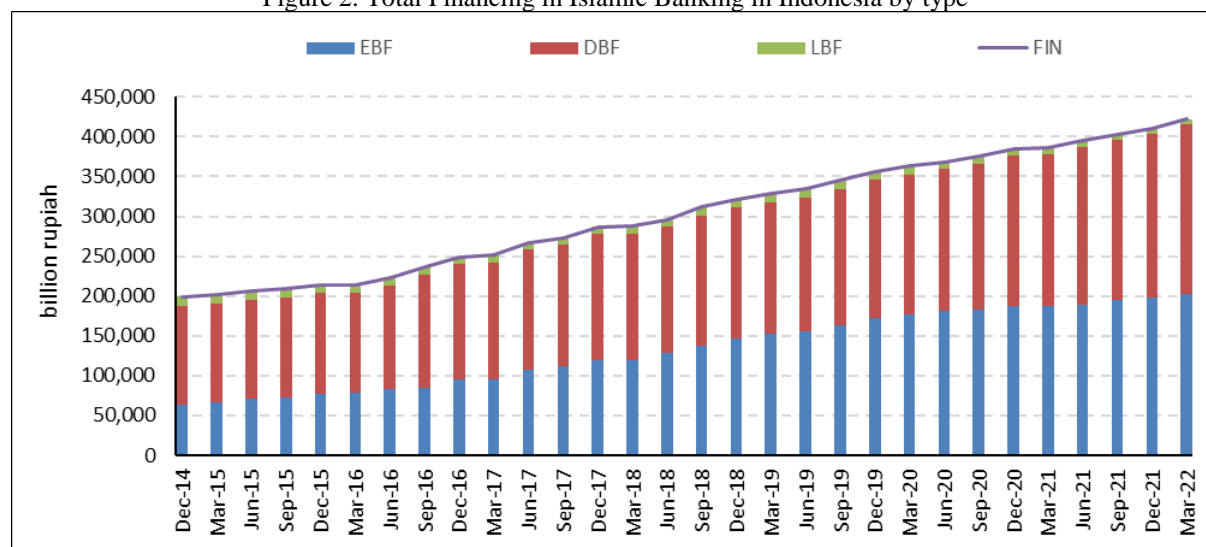
Estimation of equation (1) to (8) in the two-step EG ECM model was projected using the Ordinary Least Squares (OLS) method. Gujarati et al. (2017) argue that the model projected using the least squares method is *supposed* to be the Best Linear Unbiased Estimate (BLUE) if it accomplishes some classical expectations including free of multicollinearity, heteroscedasticity and autocorrelation and normally distributed. The multicollinearity test was passed using the heteroscedasticity test using the Breusch-Pagan-Godfrey test, the Variance Inflation Factor (VIF), and the autocorrelation test using the Breusch-Godfrey Lagrange Multiplier (LM) test. Temporarily, the residual data normality test was conducted using the Jarque-Bera test.

## RESULT AND DISCUSSION

The Indonesian Islamic bank financing growth during the observation period (last quarter of 2014 to the first quarter of 2022) averaged 2.64%. The largest average growth in financing by type was the growth in equity-based financing (EBF) of 4.1%, followed by growth

in debt-based financing (DBF) of 1.91%, and finally the growth in lease-based financing (LBF) of -1.71%. During the observation period, LBF experienced a slowdown indicating that this type of financing was starting to be abandoned, while EBF continued to dominate. The Covid-19 pandemic condition has not in the slightest affected the growth of the financing of Islamic bank. The distribution of Islamic bank financing in 2020 and 2021 is relatively normal with an average of 385.754 trillion rupiah every quarter. The slowdown only occurred in the first quarter of 2021 at which time Indonesia reached the peak of the pandemic.

Figure 2. Total Financing in Islamic Banking in Indonesia by type



Source: Financial Services Authority (2014-2021)

The descriptive statistics of each research variable are presented in Table 1. The average ratio of financing to third party funds during the observation period is 85.98%, which is above the average loan to deposit ratio of Indonesian banks (77.49%) in 2021. This indicates that Islamic banks carry out their intermediation function very well. The capacity of Islamic banks to make incomes is indicated by the average return on assets (ROA) of 1.48%, which is below the ROA of the national banking industry (1.85%). This indicates that Islamic banks are still less competitive in generating profits. Another sharia bank performance indicator is non-performing financing (NPF), which averages above 3%, for both overall financing and financing of each type. This non-performing financing is above the national average of only 3%. This is also a note for Islamic banks in maintaining the excellence of their financing. The Islamic bank financing quality is still below the national average, which means that the ability of Islamic bank management in managing financing risk still needs to be improved.

Equivalent rate (ER) shows the amount of fees charged to financing customers. The equivalent rate of equity-based financing is smaller than the equivalent rate of debt-based financing. This is even more than four times the equivalent rate of lease-based financing. This is evidence of the increasing demand for equity-based financing compared to other types of financing, and proves that Islamic bank customers are not only rational but also price sensitive customers. This also indicates that equity-based financing is more profitable for Islamic bank customers compared to other types of financing.

Table 1. Descriptive statistics

| Variable | Mean     | Std. Dev. | Maximum  | Minimum  |
|----------|----------|-----------|----------|----------|
| FIN      | 304.0431 | 72.2913   | 422.4757 | 199.3298 |
| EBF      | 133.4645 | 47.1129   | 202.0193 | 63.7412  |
| DBF      | 161.0254 | 26.4848   | 213.5432 | 123.4754 |
| LBF      | 9.5532   | 1.3129    | 11.6203  | 6.9083   |
| TPF      | 353.63   | 100.74    | 536.99   | 212.99   |
| ROA      | 1.4813   | 0.3869    | 2.1800   | 0.7900   |
| ER_EBF   | 9.1767   | 3.6030    | 17.8700  | 3.5400   |
| ER_DBF   | 11.2390  | 1.2420    | 13.7700  | 9.4700   |
| ER_LBF   | 42.7013  | 12.3749   | 64.3500  | 22.1500  |
| NPF_TF   | 3.6773   | 0.7199    | 5.0300   | 2.5700   |
| NPF_EBF  | 3.6683   | 0.7158    | 5.2900   | 2.7600   |
| NPF_DBF  | 3.7060   | 0.9498    | 5.4400   | 2.2800   |
| NPF_LBF  | 3.4417   | 1.8690    | 7.2300   | 1.4300   |
| EG       | 3.9243   | 2.8810    | 7.5800   | -6.1400  |
| INF      | 3.4237   | 1.7427    | 8.3600   | 1.3300   |
| RATE     | 5.1877   | 1.3838    | 7.7500   | 3.5000   |

Source: prepared by the authors (2023)

Macroeconomic indicators in this study include economic growth (EG), inflation (INF) and interest rates (RATE). Indonesia's economic growth before the Covid-19 pandemic in the last ten years was on average above 5%, while during the observation period it was only 3.92%. This is a result of the low economic growth during the pandemic. The lowest economic growth was recorded in the second quarter of 2020 at -5.32%, while inflation and interest rates were relatively stable.

Table 2. Stationer test result with Phillips-Perron (PP)

| Variable | Level   |        | First Difference |        |
|----------|---------|--------|------------------|--------|
|          | t-Stat  | Prob.  | t-Stat           | Prob.  |
| LnFIN    | -0.8680 | 0.7838 | -5.3762          | 0.0001 |
| LnEBF    | -2.4671 | 0.1336 | -5.6911          | 0.0001 |
| LnDBF    | 0.6018  | 0.9873 | -4.5861          | 0.0011 |
| LnLBF    | -0.5900 | 0.8581 | -2.4345          | 0.1419 |
| LnTPF    | -0.1384 | 0.9358 | -6.9319          | 0.0000 |
| ER_EBF   | -1.9518 | 0.3053 | -5.3663          | 0.0001 |
| ER_DBF   | -1.1808 | 0.6688 | -3.9660          | 0.0051 |
| ER_LBF   | -1.5574 | 0.4910 | -6.2282          | 0.0000 |

|         |         |        |         |        |
|---------|---------|--------|---------|--------|
| NPF_TF  | -0.3422 | 0.9065 | -7.0241 | 0.0000 |
| NPF_EBF | -2.6742 | 0.0906 | -5.9644 | 0.0000 |
| NPF_DBF | -0.2271 | 0.9241 | -6.8800 | 0.0000 |
| NPF_LBF | -2.2033 | 0.2094 | -5.1151 | 0.0003 |
| EG      | -2.3082 | 0.1762 | -5.4047 | 0.0001 |
| INF     | -3.5814 | 0.0126 | -7.2272 | 0.0000 |
| RATE    | -1.5420 | 0.4986 | -2.7031 | 0.0861 |

Note: Ln = natural logarithm  
 Source: prepared by the authors (2023)

The stationarity test results through the Phillips-Perron (PP) unit root examination are displayed in Table 2. At the data level, almost all variables have a t-statistical probability value of more than 0.05. Only inflation has a value below 0.05. This shows that only the inflation variable is stationary at the level while the remaining variables are not stationary. The test can be proceed to the next step if all data variables are carried out by first differencing and the results of the t-statistical probability using the PP method are attached. The result of the probability t-statistic does not exceed 0.05 (lower than 0.01). Only two variables have a probability t-stat greater than 0.05, namely the growth of lease-based financing (LnLBF) and interest rates (RATE), even so the prob. value. The t-stats of the two were already lower. For simplicity, it is assumed that all data stationarity is in first differencing. Thus, differencing to a higher level is not required indicating the ECM model to be projected later employs the integration degree at level one (first difference).

Once the data stationarity test result on the first difference was obtained, the next step was to recognize if there exists a consistent long-term relationship between the independent variables and the dependent variable for each equation. The cointegration test results were attained from the unit root residual test of the regression model assessed by the OLS method specified in equations (5) to (8). The estimation results of this regression model later will elucidate the long-term relationship occurring, when the cointegration test requirements are fulfilled. Table 3 displays the OLS method estimation results for the four equations, while Table 4 shows the cointegration test results.

Table 3. OLS estimation result

| Variable | TF      |              | EBF     |              | DBF     |              | LBF     |              |
|----------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|
|          | Coef.   | Prob. t-Stat | Coef.   | Prob. t-Stat | Coef.   | Prob. t-Stat | Coef.   | Prob. t-Stat |
| C        | 1.2627  | 0.1002       | -2.2598 | 0.0476       | 5.8029  | 0.0000       | 12.1072 | 0.0000       |
| LnTPF    | 0.8210  | 0.0000       | 1.1123  | 0.0000       | 0.5102  | 0.0000       | -0.2679 | 0.0022       |
| ROA      | 0.0357  | 0.0372       |         |              |         |              |         |              |
| ER*      |         |              | -0.0136 | 0.0158       | -0.0010 | 0.8442       | 0.0064  | 0.0000       |
| NPF*     | 0.0816  | 0.1740       | -0.0433 | 0.0246       | -0.0287 | 0.6108       | -0.0030 | 0.6910       |
| EG       | -0.0034 | 0.0132       | -0.0089 | 0.0040       | 0.0015  | 0.1305       | -0.0019 | 0.6509       |
| INF      | -0.0011 | 0.7135       | -0.0087 | 0.3064       | 0.0045  | 0.1627       | 0.0089  | 0.3871       |



| RATE          | 0.0166  | 0.0017 | 0.0342 | 0.0051 | -0.0166 | 0.0238 | 0.0332 | 0.0636 |
|---------------|---------|--------|--------|--------|---------|--------|--------|--------|
| R-Squared     | 0.9970  |        | 0.9920 |        | 0.9943  |        | 0.9094 |        |
| F-Stat        | 1,286.2 |        | 472.34 |        | 668.13  |        | 38.481 |        |
| Prob (F-Stat) | 0.0000  |        | 0.0000 |        | 0.0000  |        | 0.0000 |        |
| DW stat       | 1.7571  |        | 1.0442 |        | 1.5457  |        | 1.4141 |        |

Note: \*by type of financing  
Source: prepared by the authors (2023)

Cointegration test results using the Engel-Granger (EG) cointegration test with the Phillips-Perron (PP) method indicates the prob. the t-stat value which is less than 0.01 meaning the residual (EC) is stationary at the data level with  $\alpha = 1\%$ . This demonstrates the presence of cointegration between research variables in the long term. In other words, there exists a long-term balance between variables. Variations in the relationship between the independent and the dependent variable in the short run incline to adjust to achieve long-term equilibrium. To elucidate the long-run equilibrium function of the effect of the independent variable on the dependent variable, the OLS model estimation results in Table 3 can be used.

The long-run equilibrium model for each equation has different results. Nevertheless, there are some similarities, such as the growth of third party funds (LnTPF) and interest rates (RATE) having consistently significant effect on total financing and all types of financing. Meanwhile, inflation (INF) consistently neither effect on total financing and all types of financing significantly. Profitability (ROA) has significant effect on alpha 5%, and only affects the growth of equity-based financing and lease-based financing. The non-performing financing (NPF) variable solitary effects on debt-based financing significantly. Meanwhile, economic growth (EG) affects the growth of total financing and equity-based financing.

The coefficient of determination (R-Squared) of the four long-term equations is relatively high, reaching an average of 99%., indicating the model formed is can illuminate the effect of the long-term variables LnTPF, ROA, ER, NPF, EG, INF, and RATE on the financing variable up to 99%, while the rest is elucidated by other variables outside the model. This finding is also established by prob. F-stat smaller than 0.01 in each model. This shows that all the long-term equation models formed are feasible to be used to elucidate the effect of the independent variable on the dependent variable up to  $\alpha = 1\%$ .

Table 4. Cointegration test result: Unit root test residual (EC) with Phillips-Perron (PP)

| Variable | EC OLS | ADF         |        |
|----------|--------|-------------|--------|
|          | Model  | t-Statistic | Prob.  |
| TF       |        | -5.1033     | 0.0000 |
| EBF      |        | -2.7992     | 0.0068 |
| DBF      |        | -4.1199     | 0.0002 |
| LBF      |        | -3.4739     | 0.0011 |

Source: prepared by the authors (2023)

The ECM was shaped using the residual OLS model as the error correction (EC) variable based on the stationarity test and cointegration test results. The ECM model estimation results from the four equations are exposed in Table 5. The coefficient of determination of the four models ranges from 40 to 50 percent. That is, the ability of the independent variable to elucidate its effect on the dependent variable is not too strong, only 50% maximum. For the F test results designated by the F-stat probability of the four models, only three are below 0.05, namely the equation with the dependent variables TF, EBF, and DBF, while for LBF the value is 0.085. These results indicate that the ECM TF, EBF, and DBF models can be effectively used to elucidate the short-term effect of the independent on the dependent variable.

In this study, the error correction model employed is the two-step Engel-Granger (EG) model. The EG version of the error correction model is considered valid if the error correction coefficient (EC) is negative and acknowledged statistically significant (Engle & Granger, 1987). Based on the ECM estimation results in Table 5, the error correction coefficient (EC) of all equations is negative. However, only EC\_FIN, EC\_DBF, and EC\_LBF are significant, while the EC\_EBF coefficient is not significant. These results confirm the use of two-step ECM EG for the ECM FIN, DBF, and LBF equations in elucidating the short-term and long-term relationships existing between the variables of third party funds, equivalent rate, non-performing financing, economic growth, inflation, and interest rates. with each type of financing.

Table 5. Error Correction Model (ECM) estimation result

| Variable | TF      |              | EBF     |              | DBF     |              | LBF     |              |
|----------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|
|          | Coef.   | Prob. t-Stat | Coef.   | Prob. t-Stat | Coef.   | Prob. t-Stat | Coef.   | Prob. t-Stat |
| C        | 0.0103  | 0.0872       | 0.0254  | 0.0000       | 0.0040  | 0.3932       | -0.0062 | 0.5892       |
| D(LnTPF) | 0.5351  | 0.0033       | 0.3501  | 0.1737       | 0.4118  | 0.0050       | -0.0834 | 0.7827       |
| D(ROA)   | 0.0023  | 0.8732       |         |              |         |              |         |              |
| D(ER*)   |         |              | -0.0051 | 0.0045       | 0.0025  | 0.6293       | 0.0013  | 0.2366       |
| D(NPF*)  | 0.0440  | 0.3204       | -0.0337 | 0.0308       | -0.0075 | 0.8642       | -0.0031 | 0.5263       |
| D(EG)    | -0.0029 | 0.0638       | -0.0047 | 0.0432       | 0.0012  | 0.3167       | -0.0014 | 0.6789       |
| D(INF)   | 0.0014  | 0.6065       | -0.0033 | 0.4354       | 0.0035  | 0.2333       | 0.0122  | 0.1570       |
| D(RATE)  | 0.0076  | 0.2865       | 0.0135  | 0.2887       | -0.0133 | 0.0955       | 0.0322  | 0.0966       |
| EC(-1)   | -0.6297 | 0.0175       | -0.2209 | 0.2962       | -0.7123 | 0.0173       | -0.4200 | 0.0319       |

|               |        |        |        |        |
|---------------|--------|--------|--------|--------|
| R-Squared     | 0.5238 | 0.3927 | 0.5492 | 0.4288 |
| F-Stat        | 3.3005 | 1.9364 | 3.6542 | 2.1448 |
| Prob (F-Stat) | 0.0158 | 0.0036 | 0.0098 | 0.0856 |
| DW stat       | 1.7476 | 1.7581 | 1.6981 | 1.6267 |

Note: \*by type of financing  
 Source: prepared by the authors (2023)

The ECM regression and OLS models utilized to elucidate the short-term and long-term effects of the relationship between microeconomic and macroeconomic indicators of Islamic banking on the growth of total financing, equity-based financing, debt-based financing, and lease-based financing have been confirmed. If the two models are statistically good models, both models meet the linear regression model classical assumptions. The classical assumptions to meet are the model's freedom from multicollinearity, autocorrelation and heteroscedasticity, and the model residuals are normally distributed (normality).

Multicollinearity refers to state of reciprocal relationship between independent variables. It may lead to insignificant correlation of independent variables. The presence or absence of multicollinearity is known through the Variance Inflation Factor (VIF) indicator. The tolerable VIF value to avoid multicollinearity is 10; the greater value shows multicollinearity (Hair et al., 2018). The multicollinearity test results for the OLS and ECM models equations (1) to (8) are displayed in Table 6. The VIF value for the OLS model exceeding 10 is found in the EBF and DBF equations; meanwhile, for ECM there is no more than 10. Multicollinearity was not found in this study. ECM, while in the OLS model, LnTPF has a VIF value higher than 10. However, both of these variables still have a significant effect on the dependent variable LnEBF and LnDBF. This finding is an incongruity in the postulation of multicollinearity. Although multicollinearity did not exist, it is supposed that the multilinearity assumption is met if the two variables have a significant effect (Allison, 2012).

Table 6. Multicollinearity test result: Variance Inflation Factors (VIF)

| Variable | TF     |        | EBF     |        | DBF     |        | LBF    |        |
|----------|--------|--------|---------|--------|---------|--------|--------|--------|
|          | OLS    | ECM    | OLS     | ECM    | OLS     | ECM    | OLS    | ECM    |
| LnTPF    | 8.4347 | 3.9611 | 10.4092 | 5.6246 | 19.9830 | 2.2958 | 6.5083 | 1.6202 |
| ROA      | 4.9735 | 2.3431 |         |        |         |        |        |        |
| ER       |        |        | 6.8970  | 1.7518 | 5.5078  | 1.1830 | 2.3764 | 1.4340 |
| NPF      | 3.9135 | 1.5921 | 3.2267  | 1.9265 | 7.0065  | 2.0137 | 2.3982 | 1.1934 |
| EGH      | 1.6691 | 2.1468 | 1.2622  | 6.0747 | 1.1596  | 1.2417 | 1.8357 | 1.4227 |
| INF      | 3.7124 | 1.0576 | 4.1269  | 1.5195 | 4.2470  | 1.0599 | 3.8385 | 1.2250 |
| RATE     | 5.3302 | 1.3224 | 4.5312  | 3.3969 | 13.2280 | 1.3816 | 6.8504 | 1.2700 |
| EC(-1)   |        | 1.9779 |         | 5.7451 |         | 1.4296 |        | 1.2680 |

Source: prepared by the authors (2023)

To identify the absence or presence of autocorrelation between the two models (OLS and ECM) in each financing equation, the Breusch-Godfrey Lagrange Multiplier (LM) test was conducted. The Breusch-Godfrey LM test result for the eight equations can be observed in Table 7. The F-stat is more than 0.05 thus it is determined that the residuals of all models are not auto-correlated, thus the model is free of autocorrelation.

The heteroscedasticity test result using the Breusch-Pagan-Godfrey test is displayed in Table 8. The F-stat of all models exceeds 0.05 indicating the residuals of both models are homoscedasticity (not heteroscedasticity), concluding that the assumption of both models which are heteroscedasticity-free has been contended.

Table 7. Autorrelation test result: Breusch-Godfrey

| Model |     | F-statistic | Prob. F | Obs*R-squared | Prob. Chi-Square |
|-------|-----|-------------|---------|---------------|------------------|
| TF    | OLS | 0.1415      | 0.8689  | 0.3989        | 0.8192           |
|       | ECM | 0.4467      | 0.6463  | 1.3025        | 0.5214           |
| EBF   | OLS | 2.8453      | 0.0806  | 6.3964        | 0.0408           |
|       | ECM | 2.3943      | 0.1182  | 5.8376        | 0.0540           |
| DBF   | OLS | 0.3140      | 0.7339  | 0.8711        | 0.6469           |
|       | ECM | 0.0588      | 0.9431  | 0.1784        | 0.9147           |
| LBF   | OLS | 0.5235      | 0.6012  | 1.5392        | 0.4632           |
|       | ECM | 2.3943      | 0.1182  | 5.8376        | 0.0540           |

Source: prepared by the authors (2023)

Table 8. Heteroscedasticity test result: Breusch-Pagan-Godfrey

| Model |     | F-statistic | Prob. F | Obs*R-squared | Prob. Chi-Square |
|-------|-----|-------------|---------|---------------|------------------|
| TF    | OLS | 0.2596      | 0.9501  | 1.9026        | 0.9284           |
|       | ECM | 1.0346      | 0.4371  | 7.4366        | 0.3849           |
| EBF   | OLS | 1.0036      | 0.4469  | 6.2245        | 0.3985           |
|       | ECM | 2.3867      | 0.0580  | 12.8492       | 0.0759           |
| DBF   | OLS | 1.3309      | 0.2837  | 7.7315        | 0.2584           |
|       | ECM | 0.3593      | 0.9157  | 3.1015        | 0.8755           |
| LBF   | OLS | 0.4440      | 0.8417  | 3.1138        | 0.7944           |
|       | ECM | 1.2298      | 0.3328  | 8.4254        | 0.2966           |

Source: prepared by the authors (2023)

The residual normality test for the short-term equation (ECM) and long-term equation (OLS) models is observed in Table 9. The normality test results for the residual data for the eight models are using the Jarque-Bera test. The result of the t-stat probability is greater than 0.05, meaning the residual data is normally disseminated, so the residual data for all ECM and OLS models are evenly disseminated. Thus, the normality assumption has been met.

Table 9. Normality test result: Jarque Bera

| Residual Model |     | t-statistic | Prob.  |
|----------------|-----|-------------|--------|
| TF             | OLS | 0.8093      | 0.6672 |
|                | ECM | 0.0305      | 0.9849 |
| EBF            | OLS | 1.2163      | 0.5444 |
|                | ECM | 0.2949      | 0.8629 |
| DBF            | OLS | 0.8452      | 0.6554 |
|                | ECM | 2.1859      | 0.3352 |
| LBF            | OLS | 0.1524      | 0.9266 |
|                | ECM | 1.0017      | 0.6060 |

Source: prepared by the authors (2023)

The regression coefficient of third party funds (LnTPF) in all long-term equations (OLS) has prob. t-stat is less than 0.01, so it can be said that in the long term the growth of third party funds has a significant effect on the 1% alpha. However, not all LnTPF regression coefficients are positive. LnTPF in the LBF equation is negative. In the short-term equation (ECM), the LnTPF regression coefficient in the total financing (TF) and debt-based financing (DBF) equations has a significant effect, while the equity-based financing (EBF) and lease-based financing (LBF) equations have no significant effect. From these results, it can be proven that in the long term and short term, the growth of third party funds effect on the growth of total financing and debt-based financing positively and significantly ( $H_{1a}$  and  $H_{1c}$  are proven). Meanwhile, the growth of third party funds only has a positive significant effect on the growth of equity-based financing in the long term, and not in the short term ( $H_{1b}$  is proven). The growth of third party funds does not effect on the growth of lease-based financing both in the long term and in the short term positively and significantly ( $H_{1d}$  is not proven).

Profitability (ROA) effects on the growth of total financing (LnTF) positively and significantly in the long term, but has no effect in the short term ( $H_2$  is proven). The equivalent rate of equity-based financing (ER\_EBF) effects on the growth of equity-based financing (LnEBF) negatively and significantly in the long and short term ( $H_{3a}$  is proven). Meanwhile, the equivalent rate of debt-based financing (ER\_DBF) and the equivalent rate of lease-based financing (ER\_LBF) does not effect on financing growth negatively and significantly, both in the long and short term ( $H_{3b}$  and  $H_{3c}$  are not proven).

Only non-performing financing from equity-based financing (NPF\_EBF) effect negatively and significantly on the growth of equity-based financing (LnEBF) both in the long term and in the short term ( $H_{4b}$  is proven). Meanwhile, non-performing financing for total financing, debt-based financing and lease-based financing have no significant effect ( $H_{4a}$ ,  $H_{4c}$  and  $H_{4d}$  are not proven).

Both in the long and short term, economic growth (EG) effects significantly only on the growth in total financing (LnTF) and the growth in equity-based financing (LnEBF). However, the effect of both is negative so that it is not in accordance with the research hypothesis ( $H_{5a}$ ,  $H_{5b}$ ,  $H_{5c}$ , and  $H_{5d}$  are not proven). Meanwhile, inflation (INF) does not effect significantly on any financing growth, both in the long and short term ( $H_{6a}$ ,  $H_{6b}$ ,  $H_{6c}$ , and  $H_{6d}$  are not proven).

The last macroeconomic indicator in this study is the interest rate (RATE). Based on the t-test, almost all interest rate variables in each financing equation, both short-term and long-term effects significantly on financing growth. The effect of interest rates on total financing, equity-based financing and lease-based financing is positive ( $H_{7a}$ ,  $H_{7b}$ , and  $H_{7d}$  are proven), while the effect is negative ( $H_{7c}$  is not proven).

The growth of third party funds effect positively and significantly on financing growth, both total financing and the growth of each type of financing. The rapid increase in third party funds will encourage the distribution of financing for equity-based financing and debt-based financing. This finding is corroborated by Annisa & Yaya (2015), Arnan & Kurniawasih (2014), Destiana (2016), Ispad (2019), Jamilah (2016), Kalkarina et al. (2016) and Kurniawanti & Zulfikar (2014) which state that the greater the growth of third party funds, the greater the equity-based financing that banks will provide to customers. This is similar to the findings of Azka & Wibowo (2018), Dwijayanty (2018), and Yanis (2015) which state that the greater the growth of third party funds, the greater the growth of debt-based financing.

The increasing number of financing that can be disbursed to customers due to an increase in the third party fund quantity is quite flexible. The increase of 1% in third party fund quantity in the short term will encourage the growth of total financing by 0.82%. Meanwhile, in the long term, a 1% growth in third party funds can increase total financing by 0.54%. The third party fund growth is the most elastic in its impact on the growth of equity-based financing in the long term, not in the short term. The increase in equity-based financing has a greater impact than the increase in third party fundraising. This means that in the long term, the portion of equity-based financing will shift the portion of debt-based financing.

For the record, the growth of third party funds is the most influential factor compared to other factors. Thus, the growth of third party funds in Islamic banks becomes the central factor that can be optimized in encouraging financing growth.

The equivalent rate of equity-based financing has a negative effect on financing growth. The lower the equivalent rate of equity-based financing, the higher the growth of equity-based financing. The impact caused by the equivalent rate is quite consistent in the short and long



term. This finding is comparable to the findings of Annisa & Yaya (2015), Giannini (2013), Kiswanto (2013), and Kurniawati & Zulfikar (2014). The low equivalent rate does reduce the potential revenue that will be received by Islamic banks, but if the growth of equity-based financing can be encouraged even more rapidly, it is not impossible that Islamic banks' revenue from financing will be even greater.

Non-performing financing negatively effect on the growth of equity-based financing. This can be explained that when non-performing financing increases, management will take way more carefully in intensifying financing and will concentrate more on activities to uphold financing quality and make enhancement and retrieval efforts. This will circuitously decrease the energies and attention of banks to expand the distribution of equity-based financing. The high level of non-performing financing will make Islamic banks more careful in providing financing, and it is possible that banks will reduce their financing portion. This findings are also buttressed by Annisa & Yaya (2015), Furqaini & Yaya (2016), Ispad (2019), and Riyanto (2016) proving that non-performing financing has a negative effect on equity-based financing.

The decrease impact in equity-based financing due to an upsurge in non-performing financing in the short and long term is highly inelastic. In the short term, the increase of 1% in the NPF ratio will decrease financing growth by 0.034%. Temporarily, in the long term, the increase of 1% in the NPF ratio will decrease the growth of profit sharing financing by 0.043%. Exertions to preserve the quality of profit-sharing financing are a major work for Islamic banks. The decline in non-performing financing designates an increase in the quality of financing. This ideally should be the next work of Islamic banking industry, whether to upsurge financing growth or not.

Of the three macroeconomic indicators, only economic growth and interest rates have an effect on financing. For economic growth alone, the findings are contrary to the research hypothesis. This is possible given the unhealthy economic growth conditions in the last two years due to the pandemic. Meanwhile, interest rates effect positively and significantly on the growth of total financing, equity-based financing, and lease-based financing. This result is corroborated by the findings of Hafizh et al. (2020), and Mubarok et al. (2020) which state that an increase in interest rates will encourage the development of equity-based financing. Meanwhile, the results of this study also found that an increase in interest rates would reduce debt-based financing.

## CONCLUSION

The microeconomic condition of the Islamic banking industry as reflected by the growth of third party funds is the main determinant in encouraging the growth of the three types of financing, in addition to non-performing financing and the equivalent rate. Non-performing financing and the equivalent rate only have an impact on the growth of equity-based financing. The improvement in non-performing financing and the low equivalent rate were able to encourage the growth of equity-based financing. The conditions of the three microeconomic indicators of Islamic banks indicate a shift in the portion of the type of financing that was previously dominated by debt-based financing to equity-based financing.

Macroeconomic conditions reflected by economic growth are indicators in controlling the growth of equity-based financing, while interest rates can be used as macroeconomic indicators in controlling the growth of the three types of Islamic bank financing. The effect of interest rates on the three types of Islamic bank financing is different. The high interest rate will encourage the growth of equity-based financing, but on the other hand it will slow down the amount of debt-based financing.

The results of the study can be a recommendation for Islamic bank management in encouraging the growth of Islamic bank financing. The management of Islamic banks should focus more on raising third party funds in order to encourage the growth of their financing, because the market share of Islamic banks in Indonesia is still small, which indicates the large potential for raising funds that has not been explored. In addition to efforts to raise third party funds, Islamic banks must be more expansive in disbursing financing by maintaining the equivalent rate of equity-based financing below the average financing equivalent rate and maintaining the quality of its financing (suppressing non-performing financing). Both methods have been proven to be able to encourage consistent financing growth. The findings this study can also be a recommendation for the government in encouraging the growth of Islamic banks in Indonesia.

This study has limitations in terms of the time span of the research data. In short, the time range and research data make the time period that should be made in years, into quarters. This also limits the use of research data analysis methods. Suggestions for further research are to create a time period in years and use more complex analytical methods such as VAR or VECM to see two-way interactions between existing research variables, so that a much broader analysis can be obtained.

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