



The University of Tehran Press

Equity-Based Financing and Corporate Governance: Evidence from Islamic Banks in Indonesia

Hasan Mukhibad^{1*} | Ahmad Nurkhin² | Santi Susanti³ | Arim Nasim⁴ | Elis Mediawati⁵

1. Corresponding Author, Faculty of Economics and Business, Universitas Negeri Semarang, Indonesia. Email: hasanmukhibad@mail.unnes.ac.id

2. Faculty of Economics and Business, Universitas Negeri Semarang, Indonesia. Email: ahmadnurkhin@mail.unnes.ac.id

3. Faculty of Economics, Universitas Negeri Jakarta, Indonesia. Email: ssusanti@unj.ac.id

4. Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, Indonesia. Email: arim.nasim@upi.edu

5. Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, Indonesia. Email: elis.mediawati@upi.edu

ARTICLE INFO

Article type:

Research Article

Article History:

Received 03 November 2022

Revised 21 February 2023

Accepted 13 May 2023

Published Online 09 March 2024

Keywords:

*Equity-based financing,
Shariah supervisory board,
Islamic bank risk,
debt-based financing.*

ABSTRACT

Equity-based financing (EBF) is a contract that promotes justice, and spirituality, and is aligned with Shariah values. However, EBF in Islamic banks (IB) is lower than in debt-based financing (DBF). This study aims to demonstrate the importance of the characteristics of the board of directors (BOD) and the Shariah Supervisory Board (SSB) in the distribution of EBF. This study examines 14 IBs from 2009 to 2020, yielding 153 bank-years. This study found that the education level of the members of the SSB increased EBF. Independent BOD and the size of the SSB reduced EBF. However, when the sample is divided based on ownership, IB that are owned by state/regional government-owned conventional banks (hereafter SOCB) or private-owned conventional banks (hereafter POCB) produce different research outcomes. In SOCB, the SSB plays a larger role in increasing EBF than it does in POCB.

Cite this article: Mukhibad, H.; Nurkhin, A.; Susanti, S.; Nasim, A. & Mediawati, E. (2024). Equity-Based Financing and Corporate Governance: Evidence from Islamic Banks in Indonesia. *Interdisciplinary Journal of Management Studies (IJMS)*, 17 (2), 441-453. DOI: <http://doi.org/10.22059/ijms.2023.350653.675482>



© Hasan Mukhibad, Ahmad Nurkhin, Santi Susanti, Arim Nasim, Elis Mediawati

Publisher: University of Tehran Press.

DOI: <http://doi.org/10.22059/ijms.2023.350653.675482>

1. Introduction

Islamic banks (IB) are financial institutions that do not use the interest system to collect and distribute funds. This principle gives rise to contracts from financing and deposit products that differ from those offered by traditional banks. One of the products of IBs is financing based on *mudharabah* and *musyarakah* contracts. These products are also known as equity-based financing (hereafter EBF). EBF is a contract that promotes justice because the bank and the customer will share any profits based on the success of the customer's business. If the customer's business fails, the business losses are the responsibility of the bank, unless the loss is due to negligence by the customer (Risfandy et al., 2019). Based on this system, EBF complies with shariah values (Rahman, Latif, Muda, & Abdullah, 2014), it has spiritual value (Hidayah et al., 2019), and is a product that differentiates IB from conventional bank (CB) (Chong & Liu, 2009). On the other hand, another product, namely debt-based financing (DBF) is considered to be less in line with shariah values. The reason is that DBF financing is similar to that offered by CBs, where customers provide a fixed income to the lending bank (Alam & Parinduri, 2017).

However, the main features of IB have not been optimized. They continue to have low numbers of EBF transactions (Chong & Liu, 2009; Salman & Nawaz, 2018). The dominance of DBF financing over EBF financing shows that IB prefer financing that does not promote justice and spirituality. Warninda et al. (2019) argue that the low levels of EBF are due to the following: (1) The presence of agency problems (Beck et al., 2013); (2) information asymmetry (Warninda et al., 2019; Muda & Ismail, 2010); (3) a moral hazard (Mahmood & Rahman, 2017); (4) high monitoring costs (Hidayah et al., 2019; Rahman et al., 2014). These characteristics make EBF a riskier form of financing than DBF (Ariffin et al., 2009).

The lack of banks offering EBF is the basis for experts to explain this phenomenon. Misman et al. (2020), Warninda et al. (2019), and Mukhibad & Khafid (2018) use the credit risk as the factor causing low levels of EBF. Meanwhile, Risfandy et al. (2019), and Risfandy (2018) use fluctuations in profit sharing and business competition as the factors that cause banks to avoid EBF. To the best of the author's knowledge, there has been no previous study using the structure of corporate governance (CG) as the factor that causes banks to avoid EBF. Researchers argue that the structure of CG influences risk taking (Su & Lee, 2013; Koerniadi et al., 2014). CG's structure will influence bank policies, including the alternative types of bank financing offered (Bhat et al., 2020). The second reason is that the renewal of new contracts or products (EBF and DBF) by IB is the responsibility of the entire board of each IB (IFSB, 2005).

The board of directors (BOD) and the SSB act as consultants and supervisors for banking operations, including the development of financing contracts. Due to the complexity of the products and the transaction mechanisms used by IB, Mollah et al. (2017) argue that CG in IB enables them to take greater risks and achieve better performance. Based on these two arguments, researchers conclude that CG has an impact on EBF.

This study addresses the shortfall of previous research in many ways. Firstly, it proves empirically the influence of the CG structure on the decision to distribute EBF. Secondly, it uses EBF as an indicator of the risk in IB. Following Ariffin et al. (2009) and Khan & Ahmed (2001), EBF is a risky form of financing. Previous studies have used the credit risk, liquidity, and insolvency as indicators of risk (Mukhibad & Setiawan, 2022; Lee et al., 2020; Alabbad et al., 2019). Thirdly, the study uses a sample of all the IB in Indonesia, as Indonesia uses a two-tier system. This system separates the roles of supervisors (the board of commissioners) and management (the directors board).

2. Hypotheses Development

The BOD must provide oversight and act as a consultant for the manager in the running of the bank's operations. The reason for the existence of the BOD is to ensure that investments from the owners and other stakeholders are safe; they obtain sustainable returns and increase the bank's value. To realize this goal, the BOD monitors the bank's policies and controls the manager so he/she does not make high-risk policies which can hurt the sustainability of the bank's business.

In carrying out its duties, the BOD requires a variety of expertise, abilities, and experience. These skills are needed when they have discussions between the members or with other boards. Safiullah and Shamsuddin (2018) argue that larger boards bring more diverse knowledge, skills, and experience, so

they can provide higher-quality advice and recommendations. Coles et al. (2008) argue that larger boards are more effective in large and complex companies where these entities require specialized advice.

However, a large board has the opportunity to allow free-riding to occur, thereby reducing the quality of the supervision (Farag et al., 2018). Although there has been no previous research that explains the effect of the number of members of a BOD on EBF, M. H. Khan et al. (2020), Zeineb & Mensi (2018), and Huang & Wang (2015) prove the effect of the number of members of a BOD on risk-taking. Following the opinion of Ariffin et al. (2009) and Khan & Ahmed (2001) that EBF is a risky form of financing, then the IB policy of channeling EBF is a high-risk policy.

H1: The number of members on the BOD hurts EBF.

Researchers argue that having a BOD with expertise in finance/economics/accounting will improve the quality of the board's supervision and recommendations. Investment risk is the result of evaluating specific investments from an economic and financial standpoint. For example, an investment will be deemed to be a high-risk one if the investment is made during a recession. In addition, this investment can be termed as high risk if the potential return is also high and investment in the business sector is less stable. Consideration of this risk uses an economic approach, so that expertise in the field of economics is the main capital for a BOD to easily identify investment risks.

Minton, et al. (2014) found that boards with financial expertise are better able to identify the risks associated with banks' financial instability and can advise managers on how to avoid these risks. However, Ho, Lai, and Lee (2009) and Minton et al. (2014) found that board expertise in finance supports increased corporate risk-taking. The reason for this is that a board containing financial experts has a thorough understanding of their company's financial situation and can encourage the management to take greater risks in the hope of higher returns.

H2: The BOD's expertise in economics/finance/accounting has a positive effect on EBF.

Many experts have provided evidence that board tenure affects the board's performance in providing supervision and consultation to the manager. The impact is that board tenure has been shown to have a positive effect on firm performance (Reguera-Alvarado & Bravo, 2017), the quality of the financial reports (Kim & Yang, 2014), and a negative effect on fraud (Chen et al., 2006). The positive impact of tenure on board outcomes is that tenure allows the board to gain good expertise and develop its knowledge about managing a firm and its business environment (Reguera-Alvarado & Bravo, 2017).

Based on prior studies, researchers believe that the experience gained by long-serving board members is an important factor in enhancing a board's ability to identify business risks. The members of a BOD have more experience supervising their bank's operations due to their long tenure, and this further improves their supervision and reduces the bank's risk-taking. Bhat et al. (2019) found a relationship between board tenure and company risk using tenure as one of the indicators for determining the diversity in a board's expertise. Fauzi et al. (2017) and Ho et al. (2009) found a negative relationship between tenure and risk-taking.

H3: BOD's tenure has a negative effect on EBF.

Agency conflict can occur between management (as the agent) and owners as the principle (type 1), or between majority shareholders and minority shareholders (type 2). To reduce this agency conflict, especially in companies with controlling ownership and widely dispersed ownership, optimal supervision is needed. An independent BOD is trusted to be able to reduce any agency conflict among the majority and minority shareholders. An independent BOD is in charge of monitoring the management and reducing the possibility of abuse by large shareholders (IFC, 2014).

An independent BOD oversees the monitoring of the company's risk-taking. According to the agency theory, high risk-taking is frequently caused by information asymmetry between the management and shareholders (Zhang et al., 2018). Previous studies into the role of an independent BOD in monitoring risk have yielded mixed results. Zhang et al. (2018) found that the presence of an independent BOD increases the risk. The independent BOD may increase the risk because high risk-taking can lead to higher returns and faster growth (John et al., 2008). However, Singh et al. (2019) found that the presence of an independent BOD hurts risk. According to John et al. (2008), there is the possibility of managers taking excessive risks, so the independent BOD must assert their control so that the management implements a moderate risk policy.

H4: An independent BOD has a positive effect on EBF.

An SSB acts as a supervisor and provides consulting services to the manager. According to Law Number 21 of 2008, the main task of an SSB is to provide advice and consultation to the directors, as well as supervise a bank's activities, by shariah principles. Even though the object of supervision is to ensure shariah compliance, several researchers have evidence that SSBs play a role in improving banks' financial performance (Nomran et al., 2018; Rahayu & Rasyid, 2019; Farag, Mallin, & Ow-yong, 2018), social performance (Rahman & Bukair, 2013; Fitriyah; Oktaviana, 2007; Mutairi & Quttainah, 2017; Mallin et al., 2014), and risk disclosure (Neifar & Jarboui, 2018). The supervisory and advisory services provided by the SSB have an impact on the bank's performance. Even Mollah and Zaman (2015) argue that an SSB can put pressure on the BOD and management by limiting aggressive and risky projects.

H5: The SSB size hurts EBF.

In line with the existing concepts in the human resource management theory, a person's educational background influences his/her skills, cognition, and ability if he/she becomes a supervisor or consultant. This is the basis for Nomran and Haron (2019), and Nomran, Haron, and Hassan (2017), who all use the educational background of a person as one of the attributes of the members of an SSB, as this is a factor that can affect the effectiveness of an SSB's outcomes. An SSB serves as a supervisor and consultant for business operations, Matoussi and Grassa (2012), Grassa (2016), and Nomran et al. (2018) argue that the member's expertise in economics/finance supports an SSB in carrying out its duties effectively. According to Bukair and Abdul-Rahman (2013), the SSB's members with financial knowledge and experience can be more responsible and effective than those members who do not have any financial expertise.

The nature of the SSB's decisions can affect the acceptance of a product. This means that SSB approval certification can affect a bank's business volume, especially when its management has no right to be involved in the decisions of the SSB (Mohammed & Muhammed, 2017). Furthermore, an SSB can only recommend Shariah-compliant and low-risk products. As a result, it can prevent banks from taking excessive risks.

Alman (2012) found that the risk in an IB's portfolio increases with the number of members and the cross-membership of the SSB. However, the results of Nomran and Haron (2020) show that an SSB hurts risk taking. The decision of the SSB will affect a product's acceptance, resulting in shariah-compliance and low-risk products (Nomran & Haron, 2020). In contrast to Alman (2012) and Nomran & Haron (2020), who measure an SSB by the number of members it has, this study measures an SSB by its members' expertise in finance/accounting/economics, with the assumption being that their financial/accounting/economic expertise increases the chance of them identifying any risks faced by the bank (Minton et al., 2014).

H6: SSB's expertise in economics/finance/accounting has a positive effect on EBF.

Higher levels of education are thought to be a good proxy for higher levels of knowledge and intellectual competence (Darmadi, 2013). As a supervisor and advisor to the directors and other boards of a bank, the SSB must have the ability and intellectual competence to carry out its responsibilities. A highly educated SSB member improves bank performance (I. Khan & Zahid, 2020). The education level is a proxy for measuring the human resources' ability to achieve company goals. On this basis, Researchers argue that the education level of the members of the BOD will influence the bank's policy to avoid risky policies by decreasing EBF.

H7: The education level of the SSB's members has a positive effect on EBF.

3. Method

This research uses all the IB in Indonesia. Until 2020, there were 14 fully-fledged IBs in Indonesia. Researchers used a 12-year observation period from 2009 to 2020. Eight banks published financial reports during the observation period. However, four banks failed to submit financial statements during the observation period. Researchers generated 153 bank years using unbalanced data. The distribution of the number of observations (based on years and ownership) is presented in Table 1.

Table 1. Number of observations

Year	Based on Years.	Based on ownership	
	Observations	SOCB	POCB
2009	8	4	4
2010	10	4	6
2011	12	5	7
2012	12	5	7
2013	13	6	7
2014	14	7	7
2015	14	7	7
2016	14	7	7
2017	14	7	7
2018	14	7	7
2019	14	7	7
2020	14	7	7
Total	153	73	80

EBF has been defined as the ratio of *mudharabah* and *musyarakah* financing to total financing (Risfandy, 2018; Alam & Parinduri, 2017). The size of the BOD (BODSIZE) was determined by the number of members of the BOD. In Indonesia, the functions of bank supervision and management are divided into two tiers. The supervisory function is performed by the board of commissioners, and the management function is performed by the director (Darmadi, 2013). The BOD's expertise (EXPBOD) was measured by the ratio of the members of the BOD with an educational background in finance/accounting/economics to the total number of members of the BOD (Mollah et al., 2021). The independent BOD (INDBOD) was measured by the ratio of the number of independent BOD members to the total number of BOD members. Board tenure (TENBOD) was the average tenure of the members of the BOD in years.

The SSB's size (SSBSIZE) was determined by the number of SSB members (Jabari & Muhamad, 2020). The ratio of SSB members with an educational background in finance/accounting/economics to the total number of SSB members was used to calculate the SSB's expertise (EXPSSB) (Mukhibad et al., 2021). The SSB's education (SSBEDU) was determined by the average last education level of its members' scores (Mukhibad et al., 2021). A diploma or bachelor's degree was given a score of 1, a score of 2 was given for a master's degree, and a score of 3 for a doctoral degree.

Researchers took firm size into account because different-sized banks result in different bank risks (Hamid et al., 2020). The natural logarithm of total assets was used to calculate bank size (SIZE) (Mukhibad et al., 2022). Income diversity (DIVERINC) was calculated by dividing non-operating income by operating income (Mukhibad et al., 2022; Risfandy, 2018). The financing ratio (LOAN) was calculated by dividing the financing by the total assets (Risfandy, 2018).

The data analysis method is a quantitative approach that employs the random effects model (REM) or fixed effects model (FEM). This method was chosen because the ordinary least squares (OLS) method does not take into account a bank's unique characteristics, such as its managerial talent, corporate culture, and CG structure, which can influence decisions about its internal control system (Naheed et al., 2021). Furthermore, this employs a REM if the Hausman and Breusch and Pagan LM tests produce p values > 0.05, and it employs a FEM if both these tests produce p values < 0.05.

The research model was as follows:

$$EBF_{i,t} = \beta_0 - \beta_1 BODSIZE_{i,t} + \beta_2 EXPBOD_{i,t} + \beta_3 INDBOD_{i,t} - \beta_4 TENBOD_{i,t} - \beta_5 SSBSIZE_{i,t} + \beta_6 EXPSSB_{i,t} + \beta_7 SSBEDU_{i,t} + CONTROL_{i,t} + \varepsilon$$

4. Results

4.1. Descriptive Statistics

Table 2 shows that the sample had an average EBF of 32.6%. There were IB with EBF scores of 0.00 and IB with EBF scores of 100%. POCB owned the largest EBF. The maximum number of BOD members was 10, and the minimum number was 5. SOCB has a higher BOD size than POCB. The average independent BOD was 75%, with a maximum value of 100%. There were, however, IB with an independent BOD ratio of 33.3%. The independent BOD ratio of SOCB was higher than that of

POCB. The SOCB's BOD members had a higher average educational background in finance/accounting/economics (52.3%) than the POCB (51.2% on average). Furthermore, the SOCB had more experienced BOD members than the POCB had. The average tenure of the SOCB's BOD was 6.794 years, while that of the POCB was 6.404 years.

Demographics of the members of the SSB show that all the samples had an average of 2.315 SSB members, with the highest number being three people and the lowest number being two people. The SOCB also had a greater number of members on their BOD and SSB than the POCB did. The fact that the SOCB owned more assets than the POCB necessitated the banks having a larger number of board members for both their BOD and SSB. The SOCB had SSB members with a stronger educational background in finance/accounting/economics than the boards of the POCB had. However, the SSB's POCB members had a higher level of education than people employed by SOCB. The average education level of the members of the SSB at a SOCB was 1.900, while the POCB's education level was 2.236. The overall sample's average education level for SSB members was 2.083. This meant that the majority of the SSB members had a master's degree or higher.

Table 2. Descriptive Statistics

Variables	Panel A Full Sample				Panel B (SOCB)		Panel C (POCB)	
	Mean	Std. Dev.	Min.	Max.	Mean	Std. Dev.	Mean	Std. Dev.
EBF	0.326	0.264	0.000	1.000	0.236	0.157	0.399	0.308
BODSIZE	7.503	1.964	5.000	10.000	7.740	1.972	7.288	1.943
EXPBOD	0.523	0.270	0.000	1.000	0.536	0.234	0.512	0.296
TENBOD	6.590	2.396	0.000	12.833	6.794	3.014	6.404	1.640
INDBOD	0.750	0.284	0.333	1.000	0.664	0.274	0.828	0.271
SSBSIZE	2.315	0.466	2.000	3.000	2.397	0.493	2.250	0.436
EXPSSB	0.332	0.372	0.000	1.000	0.513	0.438	0.190	0.228
SSBEDU	2.083	0.502	1.000	3.000	1.900	0.585	2.236	0.357
LNSIZE	15.35	4.432	10.730	30.430	17.82	5.273	13.34	2.038
DIVERINC	0.447	0.175	0.120	0.897	0.373	0.219	0.506	0.095
LOAN	63.197	17.042	22.294	94.444	65.956	16.754	60.923	17.054

The correlation matrix of all the variables shows that the highest correlation (the correlation between BODSIZE and INDBOD) was 0.777. The correlation between variables was less than 0.8 (Gujarati & Porter, 2009: 338), indicating that there was no problem with multicollinearity. This conclusion was supported by the fact that the highest VIF score was 3.56 (Table 3). The VIF score was less than five, indicating that the model had no multicollinearity.

Table 3 displays the regression results for the three models. Model 1 employed the all sample. Model 2 employed the sample from the SOCB, while Model 3 employed the sample from the POCB. In model 1, the Wooldridge test for autocorrelation yielded a result of 0.155. Model 2 yielded a Wooldridge test probability of 0.0457, while model 3 yielded a probability of 0.1583. A Wooldridge probability score of greater than 0.05 indicated that there was no autocorrelation in the model, and vice versa. The Wald test for heteroscedasticity in the three models yielded a probability of 0.000 (less than 0.05), indicating that all of the models had heteroscedasticity problems. According to the Wooldridge and Wald test, models 1 and 3 had heteroscedasticity issues, while model 2 had autocorrelation and heteroscedasticity problems. Following Hoechle (2007), this study uses robust standard errors that lead to consistent results in the presence of heteroskedasticity and autocorrelation problems.

Breusch and Pagan Lagrangian multiplier test on models 1, 2, and 3 produced a p-value of 1.000 and recommended using REM as the data analysis method. A Hausman test on model 1 produced a p-value of 0.215 and recommended using REM. On the other hand, Hausman tests on models 2 and 3 produced a p-value of 0.000 and recommended using FEM. As a result, this study used REM for model 1 and FEM for models 2 and 3. Table 3 also presents the p-value of the F-test in models 1, 2, and 3, which was 0.000. This indicated that all the models were fit.

4.2. Model Test Results

Table 3 shows that BODSIZE had a coefficient of -0.020 and a p-value > 0.10. These findings indicated that the number of members of a BOD did not affect EBF. The subsample test also revealed that the number of members of a BOD did not affect EBF by SOCB and POCB. The findings of this

study differed from those of M. H. Khan et al. (2020), Y. S. Huang, and Wang (2015), which demonstrated the role of the BOD size in risk-taking. The number of members on the BOD increased the board's effectiveness in carrying out its duties because it could reduce agency costs (Nomran et al., 2018). On the other hand, a large board caused issues with free riders, communication, and coordination problems among the board members. As a result, the board's size reduced its performance effectiveness (Lee et al., 2020) and subsequently did not influence EBF. Furthermore, there is no role in EBF for a number of the members of the BOD, due to the allegation that the BOD does not differentiate between EBF and DBF, as both are permitted by the SSB and regulator.

Table 3 shows that the BOD expertise (EXPBOD) in model 1 had a coefficient of -0.056 with a p-value > 0.10. These findings indicated that the members of the BOD with a background in finance/accounting/economics did not influence EBF. This finding differed from those of Minton et al. (2014), Ho et al. (2009), and Minton et al. (2014) who all found that the BOD's expertise increased board outcomes. The difference between these findings and previous studies was due to different risk indicators. These findings supported the notion that the BOD made no distinction between EBF and DBF because both forms of financing were permitted by the SSB and the regulator. The results of this subsample test showed that the members of a BOD, with a finance/accounting/economics educational background hurt EBF in SOCB. However, in POCB, a BOD with members who had a finance/accounting/economics educational background had a positive influence on EBF. The difference in these results indicated that SOCB IB had effective risk control supervision. The trust of the stakeholders was maintained in state-owned banks by them avoiding risk-taking. On the other hand, POCB IB focused on improving its financial performance to increase customer confidence through risky financing.

Table 3. Model Test Results

	Full Sample Model 1	IBs SOCB Model 2	IBs POCB Model 3
BODSIZE	-0.020	0.001	-0.046
EXPBOD	-0.056	-0.050**	0.511**
TENBOD	0.012	-0.011	0.031
INDBOD	-0.407*	-0.004	-0.611
SSBSIZE	-0.145**	0.121**	-0.132**
EXPSSB	-0.172	0.043	0.056
SSBEDU	0.232**	0.147**	0.139
LNSIZE	-0.004	0.035***	0.017
DIVERINC	0.317*	0.188	0.210
LOAN	0.002	0.002	-0.001
Cons	0.579	-0.369*	0.494*
VIF – Mean	1.93	3.56	2.04
Wooldridge test (Prob.)	0.155	0.0457	0.1583
Modified Wald test (Prob.)	0.000	0.000	0.000
Breusch and Pagan LM test (Prob.)	1.000	1.000	1.000
Hausman (Prob.)	0.215	0.000	0.000
R-Square	0.0539	0.562	0.384
Probability > F	0.000	0.000	0.000

Notes: The table presents coefficient scores. ***, **, * shows significance at 1%, 5%, and 10% respectively with p-values.

The tenure of the board members (TENBOD) had a coefficient score of 0.012 and a p-value > 0.10. Testing of models 2 and 3 also generated a p-value > 0.10. These findings demonstrated that the tenure of the members of the BOD did not encourage IB to channel EBF. The findings differed from Reguera-Alvarado and Bravo (2017), who found board tenure had a role in controlling risk. This difference in the results would be because EBF and DBF bring in the same income; there is no difference in the income from EBF and DBF, so the board's experience does not encourage or control the IB channeling EBF.

Table 3 also shows that the independent BOD ratio (INDBOD) hurt EBF's distribution. These findings supported the findings of John et al. (2008) and Singh et al. (2019) who discovered the role of an independent BOD in risk-taking. The independent BOD, as the representative of the shareholders and owners of deposit funds, carried out effective risk management. The presence of an independent

BOD could reduce agency conflict by avoiding risk-taking (Zhang et al., 2018). The presence of an independent BOD for an IB can help to reduce the agency conflict among its stakeholders.

The first attribute of the SSB that explains its effectiveness as a supervisor of IB is the number of members of the SSB. Table 3 shows that the number of members (SSBSIZE) had a coefficient of -0.145 and a p-value < 0.05. The result showed that the number of members of an SSB had a negative influence on EBF. Model 3 also confirmed model 1, indicating that the number of SSB members had a negative influence on EBF. However, using the SOCB sample, this research found that the number of SSB members had a positive effect on EBF. This result strengthens the SSB's role in reducing risk (Nomran et al., 2018). This result also strengthened the agency theory, as IB with a large number of members on the SSB will have significant resources to exercise oversight and avoid risky policies. Although previous research did not explain the role of the number of members of an SSB on EBF, the findings of this study corroborated the findings of Alman (2012) who discovered that an SSB's size hurt risk-taking.

Table 3 shows that an SSB with members who had a background in finance/accounting/economics (EXPSSB) produced a coefficient of -0.172 with a p-value > 0.10. Models 2 and 3 reinforced the results of model 1. These findings indicated that the expertise of the members of an SSB did not affect EBF. The findings of this study differed from those of Nguyen (2021), Isa and Lee (2020), Basiruddin and Ahmed (2019), who discovered that an SSB's expertise in finance hurt risk. An SSB certifies that EBF and DBF are Shariah-compliant financing. It does not recommend one type of financing because both forms of financing are by shariah principles.

Model 1's test results showed that the education level of the members of an SSB (SSBEDU) had a coefficient of 0.232 and a p-value < 0.05. The results were supported by the results of model 2, which produced a coefficient of 0.147 with a p-value < 0.05. These findings suggested that the education level of the members of an SSB had a positive effect on EBF. These findings supported Mukhibad & Setiawan (2022), and Jabari & Muhamad (2021) in that the education level of the members of an SSB had a positive influence on risk-taking. The level of education can provide an SSB with the expertise to recognize the risks and strengths of EBF. EBF has high earning potential, which encourages an SSB to recommend that the bank's manager should channel EBF (Mukhibad & Setiawan, 2022). However, in a POCB, the education level of the members of an SSB did not affect EBF. The difference in results between SOCB and POCB IB was due to different ownership structures, which caused differences in the policies for supervision by the respective SSBs. POCB and IB bear a greater responsibility for reducing information asymmetry among the stakeholders, so their SSBs must have a greater supervisory role and thus increase their performance than those in SOCB and IB.

5. Conclusions and Recommendation or Implication

This study's findings show that an independent BOD and the number of members of an SSB have a negative influence on EBF. On the other hand, the education level of the members of an SSB has a positive influence on EBF. However, by dividing the full sample based on IB ownership (SOCB and POCB), the results show that the SSB's size and education level have a positive effect on EBF in SOCB. Conversely, the SSB's size hurts EBF in POCB. The BOD's expertise hurts EBF in SOCB and has a positive effect on EBF in POCB.

Overall, these research findings show clear differences in the influence of the characteristics of a BOD and an SSB, which might be due to differences in the ownership of each bank. SOCBs and IBs, due to the nature of state-owned banks, have poor monitoring, while their BOD tends to be conservative toward risk-taking, to safeguard their jobs.

The BOD and the SSB have been effective in controlling EBF. However in SOCB, an SSB encourages banks to provide EBF. Due to the nature of EBF, this is viewed as high-risk financing, the department/authority responsible for IBs in Indonesia should take these research results into account revise the rules, and make a greater effort to implement CG reforms for determining the expertise and independence as a requirement to become members of a BOD and educational level as a requirement to become members of a SSB members to better control the risk-taking by IBs. The regulator determines the proportion of independent BOD and the number of members of the SSB to reduce the risk of IB.

This study uses the nature of EBF, which is high-risk financing so IB should avoid EBF. Recommendations for future researchers can complement this research by empirically proving EBF's risks and profitability. Second, this study uses a sample of banks in Indonesia. Further researchers can expand the sample to include more countries while still focusing on country characteristics.

References

- Alabbad, A., Hassan, M. K., & Saba, I. (2019). Can Shariah board characteristics influence risk-taking behavior of Islamic banks? *International Journal of Islamic and Middle Eastern Finance and Management*, 12(4), 469–488. <https://doi.org/https://doi.org/10.1108/IMEFM-11-2018-0403>
- Alam, N., & Parinduri, R. A. (2017). Do Islamic banks shift from mark-up to equity financing when their contracting environments are improved? *Applied Economics Letters*, 24(8), 545–548. <https://doi.org/10.1080/13504851.2016.1210759>
- Alman, M. (2012). Shari'ah Supervisory Board Composition Effects on Islamic Banks' Risk-Taking Behavior. *Journal of Banking Regulation*, 14(1), 134–163. <https://doi.org/10.2139/ssrn.2140042>
- Basiruddin, R., & Ahmed, H. (2019). Corporate governance and Shariah non-compliant risk in Islamic banks: evidence from Southeast Asia. *Corporate Governance (Bingley)*, 20(2), 240–262. <https://doi.org/10.1108/CG-05-2019-0138>
- Beck, T., Demirgüç-Kunt, A., & Merrouche, O. (2013). Islamic vs. conventional banking: Business model, efficiency and stability. *Journal of Banking and Finance*, 37(2), 433–447. <https://doi.org/10.1016/j.jbankfin.2012.09.016>
- Bhat, K. U., Chen, Y., Jebran, K., & Memon, Z. A. (2020). Board diversity and corporate risk: evidence from China. *Corporate Governance*, 20(2), 280–293. <https://doi.org/10.1108/CG-01-2019-0001>
- Boubakri, N., Cosset, J. C., & Saffar, W. (2013). The role of state and foreign owners in corporate risk-taking: Evidence from privatization. *Journal of Financial Economics*, 108(3), 641–658. <https://doi.org/10.1016/j.jfineco.2012.12.007>
- Bukair, A. A., & Abdul-Rahman, A. (2013). The Influence of the Shariah Supervision Board on Corporate Social Responsibility Disclosure by Islamic Banks of Gulf Co-Operation Council Countries. *Asian Journal of Business and Accounting*, 6(2), 65–104. <https://doi.org/10.5296/jmr.v7i2.6989>
- Chen, G., Firth, M., Gao, D. N., & Rui, O. M. (2006). Ownership structure, corporate governance, and fraud: Evidence from China. *Journal of Corporate Finance*, 12(3), 424–448. <https://doi.org/10.1016/j.jcorpfin.2005.09.002>
- Chong, B. S., & Liu, M. H. (2009). Islamic banking: Interest-free or interest-based? *Pacific Basin Finance Journal*, 17(1), 125–144. <https://doi.org/10.1016/j.pacfin.2007.12.003>
- Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics*, 87(2), 329–356. <https://doi.org/10.1016/j.jfineco.2006.08.008>
- Darmadi, S. (2013). Board members' education and firm performance: evidence from a developing economy. *International Journal of Commerce and Management*, 23(2), 113–135. <https://doi.org/10.1108/10569211311324911>
- Farag, H., Mallin, C., & Ow-yong, K. (2018). Corporate governance in Islamic banks: New insights for dual board structure and agency relationships. *Journal of International Financial Markets, Institutions & Money*, 54(May 2018), 59–77. <https://doi.org/10.1016/j.intfin.2017.08.002>
- Farag, H., Mallin, C., & Ow-Yong, K. (2014). Corporate Social Responsibility and Financial Performance in Islamic Banks. *Journal of Economic Behavior and Organization*, 103(July), s21–s38. <https://doi.org/10.1016/j.jebo.2014.03.001>
- Fauzi, F., Basyith, A., Ho, P., Fauzi, F., Basyith, A., & Ho, P. (2017). Women on boardroom : Does it create risk? Women on boardroom : Does it create risk? *Cogent Economics & Finance*, 94(1). <https://doi.org/10.1080/23322039.2017.1325117>
- Fitriyah, F., & Oktaviana, U. O. (2007). Relevance of Financial Performance and Good Corporate Governance Determinant of Sustainability Corporate Social Responsibility Disclosure in Islamic Bank in Indonesia. *International Journal of Nusantara Islam*, 1(2), 22–37.
- Grassa, R. (2016). Corporate governance and credit rating in Islamic banks : Does Shariah governance matters ? In *Journal of Management & Governance* (Vol. 20, Issue 4). Springer US. <https://doi.org/10.1007/s10997-015-9322-4>
- Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (5th ed.). McGraw-Hill/Irwin.
- Hamid, B. A., Azmi, W., & Ali, M. (2020). Bank Risk and Financial Development: Evidence From Dual Banking Countries. *Emerging Markets Finance and Trade*, 56(2), 286–304. <https://doi.org/10.1080/1540496X.2019.1669445>
- Hidayah, N. N., Lowe, A., & Woods, M. (2019). Accounting and pseudo spirituality in Islamic financial institutions. *Critical Perspectives on Accounting*, 61, 22–37. <https://doi.org/10.1016/j.cpa.2018.09.002>
- Ho, C., Lai, G. C., & Lee, J. (2009). Corporate Governance, Audit Quality and Risk Taking In The U. S. Property Casualty Insurance Industry. *Corporate Governance, Audit Quality and Risk Taking in the u.s. Property Casualty Insurance Industry*, 7(1), 84–95.
- Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *The Stata Journal*, 7(3), 281–312. <https://doi.org/https://doi.org/10.1177/1536867X0700700301>

- Huang, Y. S., & Wang, C. (2015). Corporate Governance and Risk-taking of Chinese Firms: The Role of Board Size. *International Review of Economics and Finance*, 37(May), 96–113. <https://doi.org/10.1016/j.iref.2014.11.016>
- IFC. (2014). The Indonesia Corporate Governance Manual - First Edition. In *The indonesia corporate governance manual - First Edition* (Vol. 1). <https://doi.org/10.2307/796256>
- IFSB. (2005). *Guiding Principles of Risk Management For Institutions (Other Than Insurance Institutions) Offering Only Islamic Financial Services* (Issue December). Islamic financial services board Guiding. <https://www.ifsb.org/download.php?id=4357&lang=English&pg=/published.php>
- Isa, M., & Lee, S. P. (2020). Does the Shariah committee influence risk-taking and performance of Islamic banks in Malaysia? *Journal of Islamic Accounting and Business Research*, 11(9), 1759–0817. <https://doi.org/10.1108/JIABR-12-2018-0207>
- Jabari, H. N., & Muhamad, R. (2020). Gender diversity and financial performance of Islamic banks. *Journal of Financial Reporting and Accounting*, 19(3), 412–433. <https://doi.org/10.1108/JFRA-03-2020-0061>
- Jabari, H. N., & Muhamad, R. (2021). Diversity and risk taking in Islamic banks: Does public listing matter? *Borsa Istanbul Review*, 22(3), 546–559. <https://doi.org/10.1016/j.bir.2021.07.003>
- John, K., Litov, L., & Yeung, B. (2008). Corporate Governance and Risk-Taking. *The Journal of Finance*, LXIII(4), 1679–1728.
- Khan, I., & Zahid, S. N. (2020). The impact of Shari'ah and corporate governance on Islamic banks performance: evidence from Asia. *International Journal of Islamic and Middle Eastern Finance and Management*, 13(3), 483–501. <https://doi.org/10.1108/IMEFM-01-2019-0003>
- Khan, M. H., Fraz, A., Hassan, A., & Abedifar, P. (2020). Female board representation, risk-taking and performance: Evidence from dual banking systems. *Finance Research Letters*, 37(November 2020), 101541. <https://doi.org/10.1016/j.frl.2020.101541>
- Khan, T., & Ahmed, H. (2001). *Risk Management An Analysis of Issues In Islamic Financial Industry* (Occasional, Issue 5). Islamic Development Bank -Islamic Research and Training Institute.
- Kim, K., & Yang, J. S. (2014). Director Tenure and Financial Reporting Quality : Evidence from Korea. *Review of Integrative Business & Economics Research*, 3(1), 237–256.
- Koerniadi, H., Krishnamurti, C., & Tourani-Rad, A. (2014). Corporate governance and risk- taking in New Zealand. *Australian Journal of Management*, 39(2), 227–245. <https://doi.org/10.1177/0312896213478332>
- Lee, S. P., Isa, M., Ahmad, R., & Bacha, O. I. (2020). Governance and risk-taking in conventional and Islamic banks. *Managerial Finance*. <https://doi.org/10.1108/MF-04-2020-0146>
- Mahmood, A., & Rahman, M. A. U. (2017). PLS - A True Alternative to Interest-Based Banking: Reality or a Myth? *Journal of Finance and Bank Management*, 5(2), 32–39. <https://doi.org/10.15640/jfbm.v5n2a3>
- Matoussi, H., & Grassa, R. (2012). Is Corporate Governance Different For Islamic Banks? A Comparative Analysis Between The Gulf Cooperation Council Context and The Southeast Asia Context. *Economic Reserach Forum*, 1–30.
- Minton, B. A., Taillard, J. P., & Williamson, R. (2014). Financial Expertise of the Board, Risk Taking, and Performance : Evidence from Bank Holding Companies. *The Journal of Financial and Quantitative Analysis*, 49(2), 351–380. <https://doi.org/10.1017/S0022109014000283>
- Misman, F. N., Ahmad, W., Khairani, N. S., & Amran, N. H. (2020). Credit risk, Islamic contracts and ownership status: Evidence from Malaysian Islamic banks. *International Journal of Financial Research*, 11(3), 106–114. <https://doi.org/10.5430/ijfr.v11n3p106>
- Mohammed, S. A. S. A.-N., & Muhammed, J. (2017). The relationship between agency theory, stakeholder theory and Shariah supervisory board in Islamic banking: An attempt towards discussion. *Humanomics*, 33(1), 75–83. <https://doi.org/10.1108/H-08-2016-0062>
- Mohd Ariffin, N., Archer, S., & Karim, R. A. A. (2009). Risks in Islamic banks: Evidence from empirical research. *Journal of Banking Regulation*, 10(2), 153–163. <https://doi.org/10.1057/jbr.2008.27>
- Mollah, S., Hassan, M. K., Al Farooque, O., & Mobarek, A. (2017). The governance, risk-taking, and performance of Islamic banks. *Journal of Financial Services Research*, 51, 195–219. <https://doi.org/https://doi.org/10.1007/s10693-016-0245-2>
- Mollah, S., Liljebloom, E., & Mobarek, A. (2021). Heterogeneity in independent non-executive directors' attributes and risk-taking in large banks. *Journal of Corporate Finance*, 70(August), 102074. <https://doi.org/https://doi.org/10.1016/j.jcorpfin.2021.102074>
- Mollah, S., & Zaman, M. (2015). Shari'ah supervision , corporate governance and performance : Conventional vs . Islamic banks. *Journal of Banking & Finance*, 58(September 2015), 418–435. <https://doi.org/10.1016/j.jbankfin.2015.04.030>
- Muda, R., & Ismail, A. G. (2010). Profit-Loss Sharing and Value Creation in Islamic Banks. *Journal of Business and Policy Research*, 5(2), 262–281.

- Mukhibad, H., Jayanto, P. Y., & Anisykurlillah, I. (2021). Islamic corporate governance and financial statements fraud: A study of Islamic banks. *Journal of Governance and Regulation*, 10(2 Special issue), 361–368. <https://doi.org/10.22495/JGRV10I2SIART16>
- Mukhibad, H., & Khafid, M. (2018). Financial Performance Determinant of Islamic Banking in Indonesia. *Jurnal Keuangan Dan Perbankan*, 22(3), 506–517. <https://doi.org/https://doi.org/10.26905/jkdp.v22i3.2061>
- Mukhibad, H., & Setiawan, D. (2022). Shariah supervisory board attributes and corporate risk-taking in Islamic banks Shariah supervisory board attributes and corporate risk-taking in Islamic banks. *Cogent Business & Management*, 9(1), 1–25. <https://doi.org/10.1080/23311975.2022.2158607>
- Mukhibad, H., Yudo Jayanto, P., Suryarini, T., & Bagas Hapsoro, B. (2022). Corporate governance and Islamic bank accountability based on disclosure—a study on Islamic banks in Indonesia. *Cogent Business & Management*, 9(1), 13–19. <https://doi.org/10.1080/23311975.2022.2080151>
- Mutairi, A. R., & Quttainah, M. A. (2017). Corporate governance: Evidence from Islamic banks. *Social Responsibility Journal*, 13(3), 601–624. <https://doi.org/10.1108/SRJ-05-2016-0061>
- Naheed, R., AlHares, A., Shahab, Y., & Naheed, R. (2021). Board's financial expertise and corporate social responsibility disclosure in China. *Corporate Governance (Bingley)*, 21(4), 716–736. <https://doi.org/https://doi.org/10.1108/CG-08-2020-0329>
- Neifar, S., & Jarboui, A. (2018). Research in International Business and Finance Corporate governance and operational risk voluntary disclosure : Evidence from Islamic banks. *Research in International Business and Finance*, 46(146), 43–54. <https://doi.org/10.1016/j.ribaf.2017.09.006>
- Nguyen, Q. K. (2021). Oversight of bank risk-taking by audit committees and Sharia committees: Conventional vs Islamic banks. *Heliyon*, 7(December 2020), e07798. <https://doi.org/10.1016/j.heliyon.2021.e07798>
- Nomran, N. M., & Haron, R. (2019). Dual board governance structure and multi-bank performance: a comparative analysis between Islamic banks in Southeast Asia and GCC countries. *Corporate Governance (Bingley)*, 19(6), 1377–1402. <https://doi.org/10.1108/CG-10-2018-0329>
- Nomran, N. M., & Haron, R. (2020). Shari'ah supervisory board's size impact on performance in the Islamic banking industry: An empirical investigation of the optimal board size across jurisdictions. *Journal of Islamic Accounting and Business Research*, 11(1), 110–129. <https://doi.org/https://doi.org/10.1108/JIABR-05-2017-0070>
- Nomran, N. M., Haron, R., & Hassan, R. (2017). Bank Performance and Shari'ah Supervisory Board Attributes of Islamic Banks: Does Bank Size Matter? *Journal of Islamic Finance*, 6(Special Issue), 174–187. <https://doi.org/10.12816/0047348>
- Nomran, N. M., Haron, R., & Hassan, R. (2018). Shari'ah supervisory board characteristics effects on Islamic banks' performance: Evidence from Malaysia. *International Journal of Bank Marketing*, 36(2), 290–304. <https://doi.org/10.1108/IJBM-12-2016-0197>
- Oba, V. C. (2014). Board Dynamics and Financial Reporting Quality in Nigeria. *Review of International Comparative Management*, 15(2), 226–236.
- Rahayu, R., & Rasyid, S. (2019). *The Effect of Sharia Supervisory Board on Financial Performance , with Islamic Social Reporting as the Intervening*. 7(1), 69–72.
- Rahman, A. A., & Bukair, A. A. (2013). The Influence of the Shariah Supervision Board on Corporate Social Responsibility Disclosure by Islamic Banks of Gulf Co-Operation Council Countries. *Asian Journal of Business and Accounting*, 6(2), 65–104.
- Rahman, A. A., Latif, R. A., Muda, R., & Abdullah, M. A. (2014). Failure and potential of profit-loss sharing contracts: A perspective of New Institutional, Economic (NIE) Theory. *Pacific Basin Finance Journal*, 28, 136–151. <https://doi.org/10.1016/j.pacfin.2014.01.004>
- Reguera-Alvarado, N., & Bravo, F. (2017). The effect of independent directors' characteristics on firm performance: Tenure and multiple directorships. *Research in International Business and Finance*, 41(February), 590–599. <https://doi.org/10.1016/j.ribaf.2017.04.045>
- Risfandy, T. (2018). Equity Financing and Islamic Banks' Profitability: Evidence from the Biggest Muslim Country. *Jurnal Keuangan Dan Perbankan*, 22(3), 496–505. <https://doi.org/10.26905/jkdp.v22i3.2150>
- Risfandy, T., Harahap, B., Hakim, A. R., Sutaryo, S., Nugroho, L. I., & Trinugroho, I. (2019). Equity Financing at Islamic Banks: Do Competition and Bank Fundamentals Matter? *Emerging Markets Finance and Trade*, 00(00), 1–15. <https://doi.org/10.1080/1540496X.2018.1553160>
- Safiullah, M., & Shamsuddin, A. (2018). Risk in Islamic Banking and Corporate Governance. *Pacific-Basin Finance Journal*, 47, 129–149. <https://doi.org/10.1016/j.pacfin.2017.12.008>
- Salman, A., & Nawaz, H. (2018). Islamic financial system and conventional banking: A comparison. *Arab Economic and Business Journal*, 13(2), 155–167. <https://doi.org/10.1016/j.aebj.2018.09.003>
- Singh, G., Halari, A., & Satoh, W. (2019). Corporate governance mechanisms and risk-taking in South Africa. *International Journal of Governance and Ethics*, 13(4), 361–384. <https://doi.org/10.1504/IJBGE.2019.099568>

- Su, W., & Lee, C. (2013). *Effects of corporate governance on risk taking in Taiwanese family firms during institutional reform. 1*, 809–828. <https://doi.org/10.1007/s10490-012-9292-x>
- Warninda, T. D., Ekaputra, I. A., & Rokhim, R. (2019). Do Mudarabah and Musharakah financing impact Islamic Bank credit risk differently? *Research in International Business and Finance*, 49(March), 166–175. <https://doi.org/10.1016/j.ribaf.2019.03.002>
- Zeineb, G. Ben, & Mensi, S. (2018). Corporate governance, risk and efficiency: evidence from GCC Islamic banks. *Managerial Finance*, 44(5), 551–569. <https://doi.org/10.1108/MF-05-2017-0186>
- Zhang, C., Cheong, K. C., & Rasiah, R. (2018). Board independence, state ownership and stock return volatility during Chinese state enterprise reform. *Corporate Governance (Bingley)*, 18(2), 220–232. <https://doi.org/10.1108/CG-08-2016-0172>