# CHAPTER 4

# ANALYSIS AND DISCUSSION

## 4.1 Introduction

This chapter presents the analysis and findings of this study. The first analysis begins with the data screening, including missing data and outliers' examination, and the normality test. Secondly, this section of the chapter provides a descriptive analysis of each variable. In the third section, the researcher performed the data analysis. The data analysis in the next section discussed the multivariate analysis by using the SmartPLS Structural Equation Modeling. This section begins with the measurement model and discriminant validity assessment. Fourthly, this study discusses the tests used to assess the validity of the structural model for this study, which requires examining the coefficient of determination ($R^2$) and path coefficients. This study also assessed the mediation relationships proposed in the research model using Hayes (Ramayah et al., 2018). The following section provides the hypotheses testing on the research objectives. Finally, this chapter provides a chapter summary of the chapter.

## 4.2 Data Screening and Normality Test

Before proceeding with statistical analysis and exploring the data's characteristics, each data needs to undergo several procedures, such as data screening. The data screening procedure was performed to verify data accuracy, detect missing data, extreme responses, and ensure the data met statistical assumptions suggested by Tabachnick and Fidell (2013). The data in this study were subjected to normality assessments (Hair et al., 2010). Further, the data were edited, encoded, stored, and analyzed using SPSS. Then, the data filtering process was performed in several steps. This section discusses data cleanup procedures, including identifying missing data and how to deal with outliers.

### 4.2.1 Missing Data

Missing data refers to the information in a case that is not available that were found after the data were collected due to the not applicable information or error in data collection or data entry (Pallant, 2007; 2005). Missing data might cause severe bias in the conclusion of the empirical study, thus, it needs to be addressed wisely. This study performed the data screening to detect the missing value. It used the frequency distribution and missing value analysis for the variables to detect any missing response in the data set. Since this study was self-performing, the data collection was based on the annual report's content analysis. Supposedly, any missing data can be double-checked directly from the annual report accordingly. Therefore, the missing data were not a concern in this study.

Appendix D (D1) presents the result of the missing data performed in this study. The assessment shows no missing value detected in the data set—a complete 90 set of annual reports for the applicable Islamic banks in Malaysia. The entire data in this study

were valid. No missing data appeared in this data set since the researcher's data were being obtained and managed by the researcher.

### 4.2.2 Outlier Examination

Outliers are the extreme values that have been described as the value substantially lower or higher than the other values, which are far from the mean score in the data set (Pallant, 2005). The sample sizes may influence the outliers, for instance, the outlier effect is minimal if the sample size is greater than 250. Roscoe (1975, cited in Abbasi 2011) has proposed that sample size (n), $n > 30$ and $n < 500$ is appropriate for most research. However, the correlation is less stable when estimated from a small sample size (Tabachnick & Fidell, 2007, pp. 682 & 613).

The outlier needs to be examined to ensure the data are accurate because they impact the results of the study (Sekaran & Bougie, 2010). This study detected the outlier by using a boxplot as discussed by Pallant (2005). In the boxplot, the outlier appears in the small circle with the numbers of the case.

There are several techniques to deal with outliers. Some statistical experts suggest removing the extreme values in the data set. Simultaneously, others recommend recoding the value that is not too extreme to replace the extreme value indicated by Pallant (2005) in dealing with outliers. Meanwhile, Ramsey (2009) recommends removing the outliers from the data, however, it will reduce the observations, or the researcher can apply the winsorise technique to deal with outliers. Winsorization is the transformation of data widely used in the panel data where the extreme value is replaced within the acceptable values, which is in line with Shatnawi's (2020) study. This technique is preferable for the panel data than trimming the data (Henry & Sansing, 2013; Rivest, 1994; Yu-Jun, 2014; Zhang, 2017). Thus, this study applied the

winsorising technique to deal with outliers, and this technique can eliminate the outlier's issue, while some outliers are retained in the data set. Although several outliers were detected in the data set, the results show the cases remained since the loadings are not too far from the remaining distribution (Pallant, 2007). The boxplot shows the outlier examination presented in Appendix D (D2).

### 4.2.3 Normality Assessment

There are many statistical methods proposed to test the normality of the data differently. However, no specific standard is proposed for a particular study but may rely on the size of the data. Concerning the data in this study, since the data are ordinal, this study has transformed these data to the summated score for the normality test (Sekaran, 2003; Talib, 2015). This study examined the normality distribution of the data by two statistical components, namely, skewness and kurtosis. Skewness is a measure of asymmetry, and kurtosis measures the 'peakedness' of the distribution (Kim, 2013; Tabachnick & Fidell, 2007, 2013). The skewness and kurtosis come up with the standard error in the statistical package. Table 4.2 shows some of the values of skewness and kurtosis are not normally distributed. Thus, this study converted the value to a z-score. The z-score was obtained by dividing the skewed values or excess kurtosis by their standard errors. The value for the z-score is different according to the sample size; in the case of a small sample ($n < 50$) the z-score is ± 1.96, for a medium sample size ($50 < n < 300$), the z-score is ± 3.29. Meanwhile, the normality of the sample size is greater than 300epends on the histogram and absolute values of skewness and kurtosis only (Kim, 2013). The above suggestion was applied in this study, and it is noticed that the values are in the range of ± 3.29, which is in line with the sample size presented in Appendix D (D3).

Furthermore, the researcher created histograms to confirm that the data are normally distributed. Firstly, the histograms of the residuals illustrate the dependent variables of ROA, ROE, and DER. The histograms' bell shape confirmed the results of skewness and kurtosis, indicating that all the data are normally distributed. Based on the skewness and kurtosis examination and the residual histogram, it was confirmed that the data are normally distributed.

### 4.2.4 Common Method Variance

Common Method Variance (CMV) refers to the difference of variance when measuring a questionnaire. A self-report questionnaire, mainly collected from a single source and standard scale properties, intended for statistical and method biases. Since this study used self-collected data, there was a tendency for biases. Therefore, Harman's one-factor test was applied in this study to assess the common method biases adopted in previous studies (Alnakhli, 2019). The total variance extracted by one factor is 28.835%. It is less than the recommended threshold of 50 % (See Appendix D, D4).

## 4.3 Descriptive Statistics

This section discusses the variables' descriptive information—the data extracted from the annual report of Islamic Banks in Malaysia from corporate and financial statements. At the first step, this research considered all Islamic banks in Malaysia: Malaysian-owned and foreign-owned banks. However, the Maqasid Shariah's information from the corporate reports in the Malaysia's context from the Malaysian-foreign banks' annual reports is limited. In this regard, the current research only focused on Malaysian-owned Islamic banks. This research consists of 10 Islamic banks' yearly reports from 2011 to 2019 (nine years). Accordingly, the number of observations (10*9)

was 90. This section discusses the corporate performance's descriptive information as the dependent variables (ROA, ROE, and DER), SC, Shariah Audit, Shariah Risk, and Maqasid as independent variables (BOD Size, BOD independent, and Muslim in BOD, BOD meeting) as mediation variables.

### 4.3.1 Performance of Islamic Banks

This section provides a descriptive analysis of the Islamic banks' performance. The financial performance was measured by the financial ratios, namely, ROA, ROE, and DER, as the dependent variables. The descriptive analysis of dependent variables is presented in Table 4.1.

**Table 4.1:** Descriptive Information of Corporate Performance 2011-2019

| | | ROA | ROE | DER |
|---|---|---|---|---|
| **Samples** | Islamic Banks | 10 | 10 | 10 |
| **Mean** | | .8063 | 11.1553 | 13.3992 |
| **Median** | | .7550 | 11.1350 | 12.9700 |
| **Std. Deviation** | | .25535 | 3.46437 | 3.02085 |
| **Minimum** | | .33 | .15 | 5.96 |
| **Maximum** | | 1.60 | 19.50 | 20.86 |

In this study, the Islamic banks' performance was measured based on the ROA, ROE, and DER as presented in Table 4.1. The Table displays the mean, median, standard deviation (std), minimum, and maximum values of the variables. Regarding ROA, the Table displays the 90 observations from 10 Malaysian Islamic banks. The mean score is 0.8%, while the median is 0.7%. The standard deviation is 0.2%, and it is relatively lower than the value 1.96% standard error. The minimum value of ROA is -0.33%, while the maximum value is 1.60 %, indicating a high variation in Islamic banks' ROA in Malaysia.

On the other hand, the ROE has an overall mean of 11% and a median of 11%. The standard deviation is high at 3.4%. The values of ROE ranges between 0.15% at the minimum score and 19.50% at the maximum value, indicating a high variation in the ROE of Islamic banks in Malaysia. Furthermore, the mean value for the DER as presented in Table 4.1 is 13.39, while the median is 12.97, and the standard deviation is at the value of 3.02. The minimum value of DER is 5.96, while the maximum value is 20.86 which is also considered a high variation of DER of Islamic banks in Malaysia. However, the value of DER may differ with the other industries and depending on the characteristic and types of a business (Nurdiwaty & Faisol, 2017).

A high DER can be beneficial because it indicates that a company can easily service its debt commitments via cash flow while also leveraging equity returns, for instance, Solihati (2021) opined that a company can make more financing with the higher DER to run its business. They also tend to use the profit to pay the debts rather than dividing the dividends (Ginting et al. (2017). In the presence of a need for liquid financial claims, the study suggests that high bank leverage is the acceptable baseline for examining bank capital structure (Christopher, 2013).

### 4.3.2 Board of Director

This section provides a descriptive analysis of the mediator variable of this study. The mediator indicator in this study consists of the BOD size, BOD independence, and Muslim in BOD, and BOD meetings. The descriptive analysis of the meditator variable is presented in Table 4.2.

**Table 4.2:** Descriptive Information of Board of Director Year 2011-2019

| | | Board_Sz | Board_Ind | Board_Mus | Board_Meet |
|---|---|---|---|---|---|
| **Samples** | Islamic Banks | 10 | 10 | 10 | 10 |
| **Mean** | | 6.7222 | .4850 | .8172 | 8.7222 |
| **Median** | | 6.0000 | .5000 | 1.0000 | 9.0000 |
| **Std. Deviation** | | 1.81150 | .27206 | .24954 | 6.49637 |
| **Minimum** | | 3.00 | .00 | .22 | .00 |
| **Maximum** | | 10.00 | 1.00 | 1.00 | 25.00 |

Note: Board_Sz = BOD size, Board_Ind = BOD independent, Board_Mus = Muslim in BOD, Board_Meet = BOD meeting.

Table 4.2 shows that the average BOD size (Board_Sz) consists of six members, representing a mean of 6.722 and a median of 6. The standard deviation of the BOD size is 1.8, indicating a high variation of the BOD size. This finding is consistent with the study, indicating that the Islamic banks have at least three members and a maximum of 10 to 13 members. The banks have at least three members and a maximum of ten BOD members in a year.

The BOD independent in this study was measured by the total BOD independent's percentage from the BOD size. The Tables show that the mean of the independent BOD members of Islamic banks is 48.5% of the BOD size. The median presents 50% with a standard deviation of 0.27% within the accepted range of absolute 1.96%. Meanwhile, the analysis shows that the minimum percentage of BOD independence is 0% due to the board's information not being disclosed in the annual report. However, the minimum rate of BOD independent disclosed in the annual report is at least 29%, while the maximum is 100%.

The mean score of total Muslims on the Muslim in BOD is 82% among the Muslims with a median of 1. The standard deviation of 0.2% indicates that the companies have no significant differences in Muslim board employment. The minimum Muslims on the BOD is 22%, while the maximum is 100%. This descriptive analysis also presents 100% Muslims on the BOD due to the full-fledged Islamic banks owned

by Muslim shareholders, such as the Bank Islam Malaysia Berhad (BIMB) and Bank Muamalat Malaysia Berhad (BMMB).

Meanwhile, based on this descriptive analysis, the BOD meeting information as presented in Table 4.2 shows that the mean score of the meeting frequency is 8.72 times in average held yearly and the median indicates 9 times of meetings. The standard deviation of 6.49 means that there is a variation in the number of BOD meetings in the selected Islamic banks. This analysis is in line with the minimum meeting held 6 times by the bank except '0' for undisclosed information as stated in Table 4.2, and the maximum meeting held by banks is 25 times a year.

### 4.3.3 Shariah Committee

Table 4.3 reports the means and standard deviation for SC. The standard deviation ranges from 0.49 to 1.72, while the average rating for this dimension ranges from 2.1222 to 4.5667. Three items that score the highest average rating are the SC1 items (Profile of SC, including the name, background, and Shariah expertise of the SC members) with a mean of 4.5667, followed by SC3 (Shariah committee meetings are scheduled to be held at least six (6) times annually) with a mean of 4.5333, and SC10 (the computation of Zakat according to Shariah and declared in the SC report with the mean of 4.4667). It is indicated that each bank frequently discloses these items as essential items highlighted in the SGF. In addition, these items are also commonly endorsed in the company's corporate report and Shariah committee reports regarding the SC profile, duties and responsibilities, and zakat declaration in the SC report.

**Table 4.3:** Descriptive Analysis for SC Year 2011-2019

| Code | Items | Mean | SD |
|---|---|---|---|
| **SC1** | Profile of SC, including the name, background and Shariah expertise of the SC members. | 4.5667 | .76511 |
| **SC2** | Duties and responsibilities of SC. | 4.4222 | .68659 |
| **SC3** | Shariah committee meetings are scheduled to be held at least six (6) times annually. | 4.5333 | .73744 |
| **SC4** | The SC must attend at least 75 % minimum attendance requirement of the meetings. The attendance has been disclosed in the annual report. | 4.3556 | 1.22988 |
| **SC5** | The individual's assessment and evaluation of SC's performance. | 2.1222 | 1.37251 |
| **SC6** | The Shariah committee attended the relevant training programs. | 3.0222 | 1.72215 |
| **SC7** | Statement of Shariah committee report. | 4.4333 | .49831 |
| **SC8** | The training on the Shariah-compliant program conducted by SC. | 3.1556 | 1.32318 |
| **SC9** | SC ensures that the bank is not involved in non-permissible activities/events in the current year, declared in their reporting. | 3.2889 | 1.58110 |
| **SC10** | The computation of Zakat according to Shariah and declared in the SC report. | 4.4667 | .78182 |

Note: Likert Scale: 1 = Very weak, 2 = Weak, 3 = Moderate, 4 = Adequate, 5 = Satisfactory

This descriptive analysis presents that all the SC items indicate that the mean score is more than three (3) except the item SC5 (The individual assessment/ evaluation of SC's performance), the lowest average score for this dimension with the mean of 2.1222 is below three. However, the average means for all the ten items of SC shows a score of 3.836, which is considered high. This result presents that item SC5 is less disclosed in the annual report. It may be due to the items that stated in the SGF and SGPD not necessary required to be disclosed by the Islamic banks, perhaps this information is less important to be reported.

### 4.3.4 Shariah Audit

Table 4.4 reports the means and standard deviation (SD) for Shariah Audit and control. The SD ranges from .61250 to 1.51727, while the average rating for this dimension ranges from 3.1111 to 4.3889.

**Table 4.4:** Descriptive Analysis for Shariah Audit Year 2011-2019

| Code | Items | Mean | SD |
|---|---|---|---|
| **SA1** | Rectification plan and follow-up action on Shariah-compliant. | 3.1444 | 1.37850 |
| **SA2** | Undertake remedial rectification measures to resolve Shariah non-compliance and control mechanisms to avoid recurrences. | 4.3889 | .61250 |
| **SA3** | The Shariah audit communicates the assessment outcome and highlights any non-compliances to the Shariah Committee and the management. | 3.7111 | 1.22927 |
| **SA4** | An internal Shariah audit ensures that the assessment is conducted continuously on the processes and deliverables and determines that such processes and outcomes satisfy the needs of the Shariah. | 3.8000 | .97381 |
| **SA5** | Audit on Shariah-compliant performed by the internal auditors. | 3.7000 | 1.24024 |
| **SA6** | The Shariah audit conducted the assessment on the adequacy of Shariah governance practice. | 3.1111 | 1.51727 |
| **SA7** | A regular Shariah audit is conducted, at least on an annual basis. | 4.1444 | .81504 |
| **SA8** | The Shariah audit verifying that the IFI's key functions and business operations comply with Shariah. | 3.8667 | 1.07264 |
| **SA9** | The Shariah audit findings have been reported to the Board Audit Committee and Shariah Committee / other related committees. | 3.9333 | 1.36407 |

Note: Likert Scale: 1 = Very weak, 2 = Weak, 3 = Moderate, 4 = Adequate, 5 = Satisfactory

The highest average rating is item SA3 (Undertake remedial rectification measures to resolve Shariah non-compliance and control mechanisms to avoid recurrences) with the mean of 4.3889, followed by item SA7 with a mean of 4.1444 and SA9 (The Shariah audit findings have been reported to the Board Audit Committee and Shariah Committee/other related committees) with a mean value of 3.9333. Item SA6 (The Shariah audit conducted the assessment on the adequacy of Shariah governance practice) is of the lowest average score for this dimension with the mean score of 3.1111, followed by SA1 with the mean value of 3.1444, and SA5 (Audit on Shariah-compliant - internal auditors shall perform the function) with a mean of 3.7000. The lowest mean for these items is possibly due to the items not required to be disclosed in the audit report.

Overall, the mean score for Shariah Audit disclosure is lower than the SC, in which only SA2 and SA7 are exceed four (4). This analysis indicates that the Shariah audit items are less disclosed in the annual report, and there is a possibility that the level

of disclosure for this dimension is low. However, the average mean for all the nine Shariah Audit and control items is 3.755, which is high.

### 4.3.5 Shariah Risk

Table 4.5 reports the means and standard deviation for Shariah audit. The standard deviation ranges from .86865 to 1.36612, while the average rating for this dimension ranges from 2.2000 to 4.1778.

**Table 4.5:** Descriptive Analysis for Shariah Risk Year 2011-2019

| Code | Items | Mean | SD |
|---|---|---|---|
| **SR1** | Shariah risk function is performed by representative/risk officers with suitable qualifications (risk management background and experience in the subject matter). | 2.2000 | 1.17272 |
| **SR2** | Facilitating the process of identifying, measuring, controlling and monitoring Shariah non-compliance risks inherent in the IFI's operations and activities. | 4.0556 | 1.16466 |
| **SR3** | Formulating and recommending appropriate Shariah non-compliance risk management policies and guidelines. | 3.7222 | 1.28979 |
| **SR4** | Developing and implementing processes for Shariah non-compliance risk awareness in the IFI. | 3.4333 | 1.36612 |
| **SR5** | A Shariah risk management process to identify all possible Shariah non-compliance risks. | 3.8444 | 1.36498 |
| **SR6** | All Shariah non-compliance events are to be reported to the board of the IFI and the bank. | 4.1778 | .86865 |

Note: Likert Scale: 1 = Very weak, 2 = Weak, 3 = Moderate, 4 = Adequate, 5 = Satisfactory

The highest mean scores are for items SR6 (All Shariah non-compliance events are to be reported to the BOD of the IFI and the Bank) with the mean of 4.1778, followed by SR2 (Facilitating the process of identifying, measuring, controlling and monitoring Shariah non-compliance risks inherent in the IFI's operations and activities) with the mean value of 4.0556, and SR5 (A Shariah risk management process to identify all possible Shariah non-compliance risks) with the mean of 3.8444. Like the SC and Shariah audit, the mean score is high because the items are disclosed explicitly in the annual report. In contrast, the other three items (SR3 with a mean of 3.7222, SR4 with

a mean value of 3.4333, and SR1 with a mean score of 2.2000) have the lowest mean scores indicating that these items are less disclosed compared to other items. Item SR1 (Shariah risk function is performed by representative/risk officers with suitable qualifications (risk management background and experience in the subject matter)) is of the lowest average score for this dimension with a mean score of 2.2000, possibly due to this information not being significant to be provided since the risk information is provided in the risk section. Thus, the information on Shariah risk is not explicitly disclosed and detailed in the annual report since it is not the required items to be reported. Less disclosure on the items will affect the result of the study. It is possibly impact to the relationship between the SR to the performance whether to ROA or ROE or DER. However, the average means for all the nine items of Shariah risk shows a score of 3.57, which is considered high.

### 4.3.6 Maqasid Shariah

Table 4.6 presents the means and standard deviation for the management structure dimension of the Maqasid Shariah dimension. The standard deviation ranges from .58015 to 1.86367.

**Table 4.6:** Descriptive Analysis for Maqasid Shariah Disclosure Year 2011-2019

| | Maqasid Shariah | Mean | SD |
|---|---|---|---|
| **MaqSha1** | The bank provides sufficient information about their business on Shariah-compliant products/services. | 4.5778 | .71858 |
| **MaqSha2** | The banks disclosed all the business transactions conducted based on the Shariah contract. | 4.6111 | .64815 |
| **MaqSha3** | The banks mentioned their responsibility to pay zakat, which consists of the beneficiaries, amount and calculation. | 4.5778 | .58015 |
| **MaqSha4** | The banks disclose their purification planning on the Shariah non-compliant income. | 2.9556 | 1.57873 |
| **MaqSha5** | The bank has a clear direction in serving the Muslim community's needs. | 2.1222 | 1.23459 |

**Table 4.6** ***Cont***

| | | | |
|---|---|---|---|
| **MaqSha6** | The banks disclose that all the business transactions of the contract were conducted with the contract (uqud) statement. | 4.3778 | .74318 |
| **MaqSha7** | The bank emphasises the welfare of its employees. | 3.4000 | 1.03642 |
| **MaqSha8** | The bank also includes the right or welfare of its shareholders in its report. | 2.3333 | 1.00560 |
| **MaqSha9** | The bank takes the initiative to reward its employees for their achievements. | 2.8222 | 1.02308 |
| **MaqSha10** | The bank discloses the contribution on Employees Provident Fund for employees. | 2.6111 | .81688 |
| **MaqSha11** | The bank highlights their contribution to the SOCSO for their employees. | 1.5222 | .65733 |
| **MaqSha12** | The bank emphasises health and safety lifestyle at the workplace. | 2.8778 | 1.13006 |
| **MaqSha13** | The bank has maintained a safe working environment. | 2.4444 | 1.20962 |
| **MaqSha14** | The bank organises the program with the staff, such as staff and employer engagement program (e.g., coffee time, meeting, family day etc.). | 2.3111 | 1.26885 |
| **MaqSha15** | The bank provides training and development programs to their employees to update and increase Shariah awareness. | 2.8556 | 1.86367 |
| **MaqSha16** | The bank provides student recruitment programs by providing training modules. | 1.9444 | 1.21194 |
| **MaqSha17** | The bank provides training on monetary or financial literacy to enhance awareness. | 3.8556 | 1.69971 |
| **MaqSha18** | Supporting academic programs for school or university by organising workshops or seminars. | 2.4667 | 1.80012 |
| **MaqSha19** | Knowledge advancement by providing education grants/research. | 3.3778 | 1.54758 |
| **MaqSha20** | Installing new skills and improvement. | 2.3333 | 1.69600 |
| **MaqSha21** | Creating awareness of Islamic banking programs for all stakeholders and the community. | 4.1333 | 1.32563 |
| **MaqSha22** | Enhancing employee's knowledge by providing opportunities in education or training | 2.1333 | 1.66389 |
| **MaqSha23** | Facilities to access the knowledge (e.g., Library, source of knowledge, reading materials). | 2.9333 | 1.81628 |
| **MaqSha24** | The bank implements the equal opportunity policy. | 3.0222 | 1.54322 |
| **MaqSha25** | Employee's appreciation program. | 3.0000 | 1.53608 |
| **MaqSha26** | Customer's right to access the information. | 3.3000 | 1.52470 |
| **MaqSha27** | Customer's securities on data privacy. | 3.7222 | 1.41443 |
| **MaqSha28** | Transparency policy (Information - accessibility for all stakeholders). | 3.5111 | 1.45528 |
| **MaqSha29** | Consumer's care (via customer service). | 1.4444 | .79480 |
| **MaqSha30** | Promoting human rights. | 4.5778 | .63561 |
| **MaqSha31** | Contribution for charity (sadaqah) (other than zakat). | 3.5222 | 1.16337 |
| **MaqSha32** | Contribution for waqf. | 2.2111 | 1.73201 |
| **MaqSha33** | Sponsor for Islamic programmes/events (e.g., forum). | 2.9556 | 1.78578 |
| **MaqSha34** | Organising environmental awareness program. | 3.2889 | 1.55963 |
| **MaqSha35** | Sponsoring environmental preservation program. | 2.5111 | 1.26531 |
| **MaqSha36** | Contribution to the community program. | 3.5889 | 1.00442 |

Note: Likert Scale: 1 = Very weak, 2 = Weak, 3 = Moderate, 4 = Adequate, 5 = Satisfactory

The highest mean score is for the item MaqSha2, with a mean score of 4.6111, followed by three items with a mean score of 4.5778, namely, MaqSha1, MaqSha3, and MaqSha30. The highest mean score is due to the information explicitly disclosed in the annual report, which led the researcher to rate the high score for the items. Meanwhile, the lowest average scores are MaqSha16, MaqSha11, and MaqSha29, with the mean of 1.9444 and 1.5222, and 1.4444. These items have lower scores due to the information generally disclosed and for some other banks it is not disclosed.

## 4.4 Data Analysis

In order to achieve the objective of the current study, two primary methods of analysis were adopted in this study, namely, descriptive statistics and a multivariate approach. Several software packages were used to complete the empirical analysis of this study for each group separately. The SPSS and SmartPLS are among the software most used for this kind of analysis. SPSS is the most user-friendly and most widely used software and is suitable for cross-sectional studies. SmartPLS is a data analysis tool used for a cross-sectional, time series, economics, and panel data research, and it offers several tests that are not available in other programs (Ramayah et al., 2018). In addition, data cleaning and screening operations were conducted before hypotheses testing. When all the data had been entered into the worksheets, incomplete and missing data were excluded.

The Structural Equation Model (SEM) was adopted to investigate the relationship between endogenous and exogenous variables. It is a combination of path modelling or multiple regression and factor analysis. The SmartPLS initiated with the measurement model breaks into a confirmatory factor analysis (CFA) and confirmatory composite analysis (CCA). CFA analysis refers to confirmatory factor analysis (Ramayah et al.,

2018, p. 3). The metrics applied in CFA for the measurement model are internal consistency (reliability), convergence validity, and discriminant validity for reflective indicators. Meanwhile, the CCA in the measurement model, convergent validity, indicator collinearity, and indicator significance weight are evaluated for composite formative indicators.

## 4.5 Measurement Model

SEM is the second-generation multivariate data analysis method often used in the social science research. It can test the theoretically supported linear and additive causal models (Chin; Haenlein & Kaplan; Statsoft, cited in Ramayah et al., 2018, p. 3). The second-generation analysis refers to the ability of the SEM to test multiple regression or equations simultaneously instead of testing the multiple regression at one time by using the SPSS in the first-generation analysis (Ramayah et al., 2018, p. 3).

The SmartPLS 3.0 software was used in this study to analyse the final data. Since all the constructs in this study were modelled as reflective, the measurement model test assessed the convergent and discriminant analysis. The assessment for the measurement model goes through two steps. This assessment is carried out repeatedly until it reaches the threshold value. The measurement model assessment has been carried out to test three main assessments: Internal consistency, convergent validity, and discriminant validity. Therefore, after completing the measurement of model assessment, Table 4.7 presents the indicators after deleting several indicators below the threshold value. The path coefficient of measurement model assessment presented in Appendix D illustrates the indicators after conducting the assessment of the measurement model.

**Table 4.7:** Indicators after Measurement Model Assessment

| | Indicators |
|---|---|
| | **Shariah Committee (3)** |
| **1** | Profile of SC, including the name, background and Shariah expertise of the SC members. (Item no. 1) |
| **2** | The Shariah Committee attended the relevant training programs. (Item no. 6) |
| **3** | The training/learning on Shariah-compliant program conducted by SC. (Item no. 8) |
| | **Shariah Audit (4)** |
| **1** | Undertake remedial rectification measures to resolve Shariah non-compliance and control mechanisms to avoid recurrences. (Item no. 2) |
| **2** | Audit on Shariah-compliant performed by internal auditors. (Item no. 5) |
| **3** | The Shariah audit verifying that the IFI's key functions and business operations comply with Shariah. (Item no. 8) |
| **4** | The Shariah audit findings have been reported to the Board Audit Committee and Shariah Committee or other related committees. (Item no. 9) |
| | **Shariah Risk (4)** |
| **1** | Shariah risk function performed by representative/risk officers that have suitable qualifications (risk management background and experience in the subject matter). (Item no. 1) |
| **2** | Facilitating the process of identifying, measuring, controlling and monitoring Shariah non-compliance risks inherent in the IFI's operations and activities. (Item no. 2) |
| **3** | Formulating and recommending appropriate Shariah non-compliance risk management policies and guidelines. (Item no. 3) |
| **4** | Developing and implementing processes for Shariah non-compliance risk awareness in the IFI. (Item no. 4) |
| | **Maqasid Shariah (7)** |
| **1** | The bank provides sufficient information about their business on Shariah-compliant products/services. (Item no. 20) |
| **2** | The banks disclosed all the business transactions conducted based on the Shariah contract. (Item no. 2) |
| **3** | The banks mentioned their responsibility to pay Zakat, which consists of each recipient, amount and calculation. (Item no. 3) |
| **4** | The bank disclose their purification planning on the Shariah non-compliant income. (Item no. 4) |
| **5** | The bank has a clear direction in serving the Muslim community's need. (Item no. 5) |
| **6** | Installing new skills and improvement. (Item no. 20) |
| **7** | Contribution to the community program. (Item no. 36) |
| | **Board of Director (3)** |
| **1** | BOD Independent |
| **2** | BOD Meeting |
| **3** | Muslim in BOD |
| | **Financial Performance (3)** |
| **1** | ROA |
| **2** | ROE |
| **3** | DER |

Table 4.7 shows the current indicators of 11 Shariah governance items (SC = 3, SA = 4, and SR = 4) and seven Maqasid Shariah items. The items deleted are due to the lower loadings indicators on the assessment that influence the Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extractive (AVE).

According to Hair et al. (2017), eliminating the indicators that do not meet the threshold value, in terms of empirical perspective, has almost no effect on the parameter estimates when estimating the model. Hair et al. (2017) also emphasise that the weaker outer loadings indicators are sometimes retained based on their contribution to content validity, but the lower outer loadings indicators (below 0.40) should permanently be eliminated from the construct (Bagozzi et al. 1991; Hair et al., 2017).

Therefore, the following section provides a discussion of the measurement model assessment performed in this study.

### 4.5.1 Internal Consistency and Convergent Validity

The first step of the measurement model assessment is internal consistency. The criterion of internal consistency is Chronbach's alpha (CA). It provides an estimate of the reliability based on the intercorrelations of the observed indicator variables. There are several limitations of Cronbach's alpha; firstly, it is assumed that all indicators are equally reliable, such as having equal outer loadings on the construct. However, PLS-SEM focuses on the indicators according to their reliability.

Furthermore, Cronbach's alpha is also sensitive to the number of items in the scale. Generally, it underestimates the internal consistency reliability, such as may be used as a more conservative measure of internal consistency reliability. Therefore, due to the Cronbach's alpha's limitations, Hair et al. (2017) suggests applying the composite reliability to measure the internal consistency. Generally, composite reliability is interpreted in the same way as Cronbach's alpha. The following is a rule of thumb for Cronbach's alpha and composite reliability.

Rule of Thumb for Internal Consistency Assessment

| Index | Guidelines |
|---|---|
| Composite Reliability (CR) | CR > 0.90 (Not Desirable)<br>CR > 0.7 – 0.9 (Satisfactory)<br>CR > 0.6 (For exploratory research) |

Source: Hair et al. (2017)

In addition, the composite reliability is calculated using the following formula:

$$CR = \left(\sum K\right)^2 / \left(\left(\sum K\right)^2 + \left(\sum 1 - K^2\right)\right)$$

(1.1) *Where K is the factor loading of every item.*

Secondly, the measurement model measures the convergence validity through the AVE loading factor and score. Convergence validity is the extent to which a measure correlates positively with alternative measures of the same construct. For the reflective construct, the outer loading's indicators and AVE need to consider evaluating the convergence validity. Hair et al. (2017) explains that high outer loadings on a construct indicate that the associated indicators have much in common, which is captured by the construct. The outer loadings of all indicators should be statistically significant, with a common rule of thumb that the standardized outer loadings should be 0.708 or higher.

Researchers frequently face weaker outer loadings in social science, mainly for a newly developed scale (Hulland, 1999). The outer loading is considered weaker for the value < 0.70. Rather than eliminating the weaker outer loading (< 0.70), the considerations of whether to delete an indicator depending on the extent to which its removal affects content validity. Weaker outer loading indicators are sometimes retained based on their contribution to content validity. However, the low outer

loadings (below 0.40) indicators should be eliminated from the construct (Bagozzi, Yi, & Philipps, 1991; Hair et al., 2011).

According to Hair et al. (2017) and Ramayah et al. (2018), the rule of thumb for the score for AVE is > 0.50. The AVE is calculated using the following formula.

$$AVE = \sum K^2 \ / \ n$$

(1.2) *Where K is the factor loading of every item, and n is the number of items in a model.*

Therefore, Table 4.8 presents the measurement model assessment and the discussion of the assessment result, consisting of the Factor loading, CA, CR, and AVE.

**Table 4.8:** Convergent Validity for Reflective Measurement Model

| Construct | Items | Loadings | CA | CR | AVE |
|---|---|---|---|---|---|
| **SC** | SC1 | 0.927 | 0.715 | 0.801 | 0.580 |
| | SC6 | 0.674 | | | |
| | SC8 | 0.653 | | | |
| **SA** | SA2 | 0.623 | 0.756 | 0.844 | 0.578 |
| | SA5 | 0.827 | | | |
| | SA8 | 0.812 | | | |
| | SA9 | 0.762 | | | |
| **SR** | SR1 | 0.787 | 0.770 | 0.830 | 0.553 |
| | SR2 | 0.632 | | | |
| | SR3 | 0.842 | | | |
| | SR4 | 0.691 | | | |
| **MS** | Maq1 | 0.718 | 0.857 | 0.890 | 0.537 |
| | Maq2 | 0.775 | | | |
| | Maq3 | 0.703 | | | |
| | Maq4 | 0.804 | | | |
| | Maq5 | 0.746 | | | |
| | Maq20 | 0.753 | | | |
| | Maq36 | 0.618 | | | |

**Table 4.8** ***Cont***

| | | | | | |
|---|---|---|---|---|---|
| **BOD** | BOARD_IND | 848 | 0.680 | 0.822 | 0.608 |
| | BOARD_MEET | 0.798 | | | |
| | BOARD_MUS | 0.684 | | | |
| **ROA** | ROA | 1.000 | 1.000 | 1.000 | 1.000 |
| **ROE** | ROE | 1.000 | 1.000 | 1.000 | 1.000 |
| **DER** | DER | 1.000 | 1.000 | 1.000 | 1.000 |

Note: SA = Shariah audit, SR = Shariah risk, MS = Maqasid Shariah, BOD = Board of Director/ Board Due to low loading, several items were deleted; Table 4.7 presents the present items used in this assessment.

In the following step of the assessment, the value of each item has reached the threshold values. Table 4.8 shows four sets of convergent analyses run to determine the items loading, Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE) values. The items loadings of each construct range from 0.623 to 1.000, as stated in Table 4.8. The results also show that the CA value is in the range of 0.680 to 1.000. In the measurement model, the internal consistency reliability is achieved when each construct's CR exceeds the threshold value of 0.7. The CR values show how the items indicate the latent construct ranges from 0.801 to 1.000. These results suggest that the items used to represent the constructs poses satisfactory internal consistency reliability. Therefore, based on the results found in this study, the CR and CA requirements met the recommended value exceeded 0.7, except BOD 0.680.

Furthermore, following the Bagozzi and Yi (1989), Fornell and Larcker (1981), and Hair et al. (2017), the measurement model's convergent validity is assessed by examining its AVE value. The value of convergent validity is adequate when the constructs have an AVE value close to 0.5 or higher. Table 4.8 shows that all constructs have an AVE score value in the range of 0.537 to 1.000, indicating that the AVE values exceed the recommended value of 0.5. This suggests that the measurement model

exhibits an adequate convergent validity. Therefore, the next step of measurement testing was reliable to proceed.

### 4.5.2 Discriminant Validity

The second assessment for the measurement model is discriminant validity. This assessment consists of three discriminant validity criteria: Fornell-Larcker Criterion, Cross loadings, and HTMT. These criteria verify that the model of this study has achieved discriminant validity.

Table 4.9 (Fornell-Larcker criterion) indicates that all constructs exhibit sufficient or satisfactory discriminant validity according to the Fornell-Larcker criterion, where the square root of AVE (diagonal) is larger than the correlation (off-diagonal) for all reflective constructs. The bolded elements in Table 4.9 present the square roots of the AVE, and non-bolded values represent the inter-correlation value between constructs. Thus, this Table shows all off-diagonal features are lower than the square roots of AVE, confirming that Fornell-Larcker's criterion was met.

**Table 4.9:** Fornell-Larcker Criterion

| | **BOD** | **DER** | **MS** | **ROA** | **ROE** | **SA** | **SR** | **SC** |
|---|---|---|---|---|---|---|---|---|
| **BOD** | **0.780** | | | | | | | |
| **DER** | -0.367 | **1.000** | | | | | | |
| **MS** | 0.521 | -0.128 | **0.733** | | | | | |
| **ROA** | -0.196 | -0.361 | 0.146 | **1.000** | | | | |
| **ROE** | -0.51 | 0.466 | -0.071 | 0.525 | **1.000** | | | |
| **SA** | -0.317 | 0.059 | -0.24 | 0.189 | 0.146 | **0.760** | | |
| **SR** | 0.231 | -0.323 | 0.229 | 0.125 | -0.221 | 0.484 | **0.743** | |
| **SC** | 0.455 | 0.127 | 0.552 | -0.036 | -0.024 | 0.16 | 0.362 | **0.761** |

Note: SA = Shariah audit, SR = Shariah risk, MS = Maqasid Shariah, BOD = Board of Director/ Board

The second assessment for discriminant validity involves examining indicators and comparing the cross-loading between the constructs. The factor loading indicators

on the assigned construct should be loaded at higher than all other constructs. The output of cross-loadings, produced by the SmartPLS algorithm function are presented in Table 4.10.

**Table 4.10:** Cross Loading

| | BOD | DER | MS | ROA | ROE | SA | SR | SC |
|---|---|---|---|---|---|---|---|---|
| **BOARD_IND** | **0.848** | -0.339 | 0.373 | -0.137 | -0.408 | -0.276 | 0.237 | 0.345 |
| **BOARD_MEET** | **0.798** | -0.45 | 0.286 | -0.244 | -0.603 | -0.283 | 0.079 | 0.162 |
| **BOARD_MUS** | **0.685** | 0.021 | 0.646 | -0.046 | -0.094 | -0.161 | 0.255 | 0.667 |
| **DER** | -0.367 | **1.000** | -0.128 | -0.361 | 0.466 | 0.059 | -0.323 | 0.127 |
| **Maq1** | 0.601 | 0.151 | **0.718** | 0.011 | 0.043 | -0.17 | 0.233 | 0.646 |
| **Maq2** | 0.48 | -0.055 | **0.775** | -0.002 | -0.118 | -0.174 | 0.024 | 0.453 |
| **Maq20** | 0.297 | -0.331 | **0.703** | 0.128 | -0.229 | -0.033 | 0.339 | 0.339 |
| **Maq3** | 0.219 | -0.087 | **0.804** | 0.18 | 0.045 | -0.081 | 0.097 | 0.393 |
| **Maq36** | 0.36 | -0.183 | **0.746** | 0.277 | 0.036 | -0.231 | 0.231 | 0.368 |
| **Maq4** | 0.289 | -0.005 | **0.753** | 0.011 | -0.036 | -0.358 | 0.027 | 0.388 |
| **Maq5** | 0.221 | -0.204 | **0.618** | 0.182 | -0.098 | -0.211 | 0.139 | 0.081 |
| **ROA** | -0.196 | -0.361 | 0.146 | **1.000** | 0.525 | 0.189 | 0.125 | -0.036 |
| **ROE** | -0.51 | 0.466 | -0.071 | 0.525 | **1.000** | 0.146 | -0.221 | -0.024 |
| **SA2** | -0.173 | 0.026 | -0.247 | 0.143 | 0.018 | **0.623** | 0.202 | -0.086 |
| **SA5** | -0.307 | 0.049 | -0.242 | 0.148 | 0.114 | **0.827** | 0.47 | 0.271 |
| **SA8** | -0.196 | 0.076 | -0.105 | 0.105 | 0.136 | **0.812** | 0.397 | 0.254 |
| **SA9** | -0.256 | 0.031 | -0.145 | 0.173 | 0.149 | **0.762** | 0.355 | -0.005 |
| **SC1** | 0.488 | 0.136 | 0.583 | -0.133 | -0.091 | 0.002 | 0.274 | **0.927** |
| **SC6** | 0.25 | 0.022 | 0.279 | 0.168 | 0.095 | 0.372 | 0.365 | **0.674** |
| **SC8** | 0.068 | 0.136 | 0.194 | 0.064 | 0.092 | 0.273 | 0.283 | **0.652** |
| **SR1** | 0.174 | -0.255 | 0.299 | 0.223 | -0.086 | 0.271 | **0.787** | 0.158 |
| **SR2** | 0.046 | -0.034 | 0.167 | 0.04 | -0.051 | 0.453 | **0.635** | 0.324 |
| **SR3** | 0.221 | -0.347 | 0.072 | 0.018 | -0.296 | 0.421 | **0.842** | 0.343 |
| **SR4** | 0.149 | -0.115 | 0.226 | 0.091 | -0.085 | 0.435 | **0.691** | 0.338 |

All measurement items in this research, as shown in Table 4.10, loaded higher against their respective intended latent variables than other variables. Further, each block's loading is higher than any block in parallel rows and columns, clearly separating each latent variable as theorised in the conceptual model. Thus, the cross-loading output confirms that the measurement model's discriminant validity was achieved as the constructs are distinctly different.

Next, the third method of assessing the discriminant validity is using the HTMT technique developed by Henseler et al. (2015). HTMT is suggested by Kline (2011) at the stringent criterion of 0.85.

**Table 4.11:** Heterotrait- Monotrait Ratio (HTMT) Criterion

| | **BOD** | **DER** | **MS** | **ROA** | **ROE** | **SA** | **SR** | **SC** |
|---|---|---|---|---|---|---|---|---|
| **BOD** | | | | | | | | |
| **DER** | **0.420** | | | | | | | |
| **MS** | 0.676 | **0.213** | | | | | | |
| **ROA** | 0.221 | 0.361 | **0.166** | | | | | |
| **ROE** | 0.572 | 0.466 | 0.127 | **0.525** | | | | |
| **SA** | 0.416 | 0.069 | 0.329 | 0.216 | **0.158** | | | |
| **SR** | 0.365 | 0.278 | 0.314 | 0.138 | 0.192 | **0.651** | | |
| **SC** | 0.65 | 0.145 | 0.529 | 0.18 | 0.138 | 0.487 | **0.566** | |

Note: SA = Shariah audit, SR = Shariah risk, MS = Maqasid Shariah, BOD = Board of Director/ Board

Table 4.11 (HTMT) shows that all the values have fulfilled the HTMT threshold of 0.85 (Henseler et al., 2015; Kline, 2011).

## 4.6 Structural Model

The subsections discuss the assessment used to assess the validity of the structural model for this study, which requires the assessment of the structural model for collinearity, assessing the significance and relevance of the structural model relationship, examining the coefficient of determination ($R^2$), assessing the effect size, and assessing of predictive relevance $Q^2$. Path coefficients between latent variables are assessed to confirm or disconfirm each hypothesis and the relationship between dependent and independent variables. This study also assessed the mediation

relationships proposed in the research model using Hayes (as cited in Ramayah et al., 2018). The significance of mediators was tested using Preacher and Hayes.

### 4.6.1 Lateral Collinearity Assessment

Lateral collinearity issues are a crucial stage to be addressed in assessing the structural model. A high correlation between variables can lead to a multicollinearity problem, which will affect the reliability estimate (Acock; Gujarati & Porter as cited in Alotaibi & Hussainey, 2016). Although all the constructs met the discriminant validity criteria, the collinearity issue might affect the findings by covering up a substantial causal effect in the model. Typically, multicollinearity issues occur when the two hypothesised variables are causally a related measure of the same construct. Each set of predictor constructs needs to be addressed separately for each subset of the structural model (Ramayah et al., 2018), following the rule of thumb for VIF.

Rule of Thumb for Lateral Collinearity Assessment

| Index | Level of Acceptance | Literature |
|---|---|---|
| **VIF** | ≤ 3.3 | Diamantopoulos & Sigouw (2006) |
| | ≤ 5.0 | Hair et al. (2017) |

Source: Ramayah et al. (2018)

Therefore, Table 4.12 illustrates the VIF assessment results for this study.

**Table 4.12:** Variance Inflator Factor (VIF)

| | VIF |
|---|---|
| **BOARD_IND** | 1.556 |
| **BOARD_MEET** | 1.307 |
| **BOARD_MUS** | 1.302 |
| **DER** | 1 |
| **Maq1** | 1.694 |
| **Maq2** | 2.213 |
| **Maq20** | 1.777 |

| Table 4.12 *Cont.* | |
|---|---|
| **Maq3** | 2.64 |
| **Maq36** | 1.874 |
| **Maq4** | 2.121 |
| **Maq5** | 1.55 |
| **ROA** | 1 |
| **ROE** | 1 |
| **SA2** | 1.257 |
| **SA5** | 1.686 |
| **SA8** | 1.824 |
| **SA9** | 1.375 |
| **SC1** | 1.294 |
| **SC6** | 1.46 |
| **SC8** | 1.597 |
| **SR1** | 1.481 |
| **SR2** | 1.761 |
| **SR3** | 1.307 |
| **SR4** | 1.742 |

The redundancy analysis result of the path coefficient is 0.625, and the value is sufficient for an exploratory study (Hair et al., 2017). Moreover, the Variance Inflation Factor (VIF) values for SC, Shariah audit, Shariah risk, Maqasid Shariah, BOD, ROA, ROE, and DER were all below the threshold of 5.0 (Hair, Ringle and Sarstedt, 2011). The results, therefore, did not indicate a multicollinearity problem.

### 4.6.2 Coefficient of Determination ($R^2$)

The coefficient of determination ($R^2$) value indicates the amount of variance in a dependent variable that is explained by the independent variables. In other words, it is the proportion of variability in the data that the measurement model explains. This value should be high to explain the endogenous latent variable's variance well, therefore, a larger $R^2$ value increases the predictive ability of the structural model. In this research, the SmartPLS algorithm function was used to obtain the $R^2$ values, while the SmartPLS bootstrapping function was generating 5000 samples from 90 cases, used to generate

the t-statistics values. Following Cohan (1989), the values $R^2$ of 0.02, 0.13, and 0.26 represent weak, moderate, and substantial, following the detail for rule of thumb according to Hair et al. (2017).

Rule of Thumb for $R^2$

| Index | Level of Acceptance | Literature |
|---|---|---|
| Coefficient of determination | 0.26 – Substantial<br>0.13 – Moderate<br>0.02 - Weak | Cohen (1989) |
| | 0.67 – Substantial<br>0.33 – Moderate<br>0.19 - Weak | Chin (1998) |
| | 0.75 – Substantial<br>0.50 – Moderate<br>0.0.25 - Weak | Hair et al. (2017) |

Source: Ramayah et al. (2018)

Therefore, Table 4.13 provides the result of the $R^2$ assessment for this study.

**Table 4.13:** $R^2$ Assessment Result

| Index | $R^2$ | $R^2$ Adjusted |
|---|---|---|
| ROA | 0.174 | 0.125 |
| ROE | 0.372 | 0.335 |
| DER | 0.377 | 0.34 |
| BOD | 0.456 | 0.431 |

Note: BOD = Board of Director/ Board

Based on the rule of thumb, the results of the structural model show 17.4 % of the variance ($R^2$) for ROA, 37.2 % for ROE, and 37.7 % for DER towards SC, Shariah audit, Shariah risk, Maqasid Shariah, and BOD. Meanwhile, there is 45.6 % of the variance ($R^2$) BOD towards SC, Shariah Audit, Shariah Risk, and Maqasid Shariah. Therefore, these values are considered moderate and substantial, which means that according to Cohen (1989), the $R^2$ criterion was met, and the structural model has an adequate predictive ability.

### 4.6.3 Effect Size ($f^2$)

An effect size ($f^2$) is used to assess an explanatory construct's relative impact on a dependent construct (Ali, 2018). Therefore, the effect size $f^2$ were assessed, according to Ramayah et al. (2018), as asserted by Sullivan and Fein (2012), the substantive significance and statistical significance (p-value) are essential to be reported.

Rule of Thumb for Effect Size ($f^2$)

| Index | Level of Acceptance | Literature |
|---|---|---|
| Effect size to $R^2$ | 0.35 – Substantial effect size<br>0.15 – Moderate effect size<br>0.02 – Small effect size | Cohen (1989) |

Source: Ramayah et al. (2018)

Thus, to measure the effect size, this study applied the guidelines by Cohan (1988). Table 4.14 illustrates the effect size results of this study. The values 0.02, 0.15, and 0.35 represent small, medium, and substantial effect sizes.

**Table 4.14:** Result of Effect Size ($f^2$)

| Exogenous Construct | Endogenous (Model 1) | Effect Size | Endogenous (Model 2) | Effect Size | Endogenous (Model 3) | Effect Size |
|---|---|---|---|---|---|---|
| | ROA | | ROE | | DER | |
| SC | 0.028 | Small | 0.044 | Small | 0.224 | Moderate |
| SA | 0.025 | Small | 0.004 | No | 0.000 | No |
| SR | 0.003 | No | 0.051 | Small | 0.129 | Small |
| MS | 0.126 | Small | 0.037 | Small | 0.007 | No |
| BOD | 0.052 | Small | 0.363 | Substantial | 0.203 | Moderate |

Note: SA = Shariah audit, SR = Shariah risk, MS = Maqasid Shariah, BOD = Board of Director/ Board

From Table 4.14, it can be observed that SC has a small effect size in producing the $R^2$ for ROA, ROE, and medium effect size for DER. Moreover, the result indicates that the Shariah audit has a small effect size in producing $R^2$ for ROA, no effect size in producing $R^2$ for ROE and DER. Furthermore, it shows that the Shariah risk has a small effect on producing $R^2$ for ROE and DER, while no effect on producing $R^2$ for ROA. The Maqasid Shariah has a small effect in producing $R^2$ for ROA and ROE, while no

effect in producing $R^2$ for DER. Finally, the result indicates that the BOD has a large effect in producing $R^2$ for ROE and a small effect in producing the $R^2$ for ROA and moderate effect on DER.

### 4.6.4 Predictive Relevance $Q^2$ (Blindfolding)

Similarly, the predictive relevance of the model was examined using the blindfolding procedure. This procedure produces the $Q^2$ values, which applies a sample re-use technique that omits part of the data matrix and uses the model estimates to predict this part. A $Q^2$ value larger than zero in the cross-validated redundancy report indicates the model has predictive relevance for a specific endogenous construct (Fornell & Cha, 1994; Hair et al., 2017), following the rule of thumb of $Q^2$.

Rule of Thumb of $Q^2$

| Index | Level of Acceptance | Literature |
|---|---|---|
| Stone-Geisser $Q^2$ predictive relevance | A value larger than 0 indicates that exogenous construct has predictive relevance for endogenous construct | Hair et al. (2007), Stone (1974), and Geiser (1974) |

Source: Ramayah et al. (2018)

Thus, the results of the $Q^2$ are as presented in Table 4.15.

**Table 4.15:** Predictive Relevance (Blindfolding) $Q^2$

| Model | $Q^2$ (=1-SSE/SSO) | Predictive Value (yes/no) |
|---|---|---|
| ROA | 0.109 | Yes |
| ROE | 0.288 | Yes |
| DER | 0.322 | Yes |
| BOD | 0.248 | Yes |

Note: BOD = Board of Director/ Board.

Table 4.15 presents the $Q^2$ values of all the dependent constructs. All $Q^2$ values ($Q^2 = 0.109$, $Q^2 = 0.288$, $Q^2 = 0.322$, $Q^2 = 0.248$) are considerably above zero, indicating

that the models have sufficient predictive relevance in terms of an out-of-sample prediction.

### 4.6.5 Path Coefficients

Path coefficients allow the researcher to confirm or disconfirm each hypothesis and the relationship between dependent and independent variables. Path coefficients can be interpreted as standardised beta coefficients that are calculated in ordinary least squares regression. The bootstrapping technique is used to determine whether the significance of path coefficients, along with t-statistics. The path coefficients' significance levels were obtained using the bootstrapping procedure (Hair et al., 2017), following the path coefficient values proposed by Hair et al. (2017).

Rule of Thumb for Path Coefficient

| Index | Level of Acceptance | Literature |
|---|---|---|
| Path Coefficient | *P value* < 0.01<br>*t value* > 2.58 (two-tailed)<br>*t value* > 2.33 (one-tailed) | Hair et al. (2017) |
| | *P value* < 0.05<br>*t value* > 1.96 (two-tailed)<br>*t value* > 1.645 (one-tailed) | |
| | *P value* < 0.10<br>*t value* > 1.645 (two-tailed)<br>*t value* > 1.28 (one-tailed) | |

Source: Ramayah et al. (2018)

Table 4.16 shows the hypothesis testing direct effect and Table 4.17 shows the hypothesis testing mediator effect presented by the path coefficients, t-statistics, and significance level for the hypothesised direct effect relationships and mediator effect. The path coefficient assessment will indicate whether each proposed hypothesis is significant or not.

Furthermore, this research applied a one-tailed test as recommended by Ramayah et al. (2018). It is recommended to apply a one-tail test if the coefficient is assumed to

have a sign (negative or positive), which should be reflected in the hypothesis that refers to the corresponding association. On the other hand, a two-tailed test is recommended if no assumptions are made about the sign of the coefficients (Knock as cited in Ali et al., 2018). These results are discussed in the next section.

#### 4.6.5.1 Hypothesis Testing and Direct Effect Analysis

Path coefficients between latent variables were assessed to test the proposed hypotheses and the structural model. A path coefficient value should be at least 0.1 to account for a specific impact within the model (Hair et al., 2011; Wetzels et al., 2009). Table 4.16 presents the path coefficients in this model.

**Table 4.16:** Path Coefficient Hypothesis Testing (Direct Effect)

| Hypothesis | Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|---|
| **H1a** | SSB -> ROA | -0.209 | 0.175 | 1.192 | 0.117 | No |
| **H1b** | SSB -> ROE | 0.229 | 0.139 | 1.648 | 0.050 | Yes |
| **H1c** | SSB -> DER | 0.536 | 0.165 | 3.246 | 0.001 | Yes |
| **H2a** | SA -> ROA | 0.209 | 0.171 | 1.225 | 0.110 | No |
| **H2b** | SA -> ROE | 0.069 | 0.124 | 0.557 | 0.289 | No |
| **H2c** | SA -> DER | -0.019 | 0.149 | 0.126 | 0.450 | No |
| **H3a** | SR -> ROA | 0.062 | 0.121 | 0.518 | 0.302 | No |
| **H3b** | SR -> ROE | -0.236 | 0.119 | 1.916 | 0.028 | Yes |
| **H3c** | SR -> DER | -0.376 | 0.114 | 3.173 | 0.001 | Yes |
| **H4a** | MS -> ROA | 0.443 | 0.132 | 3.363 | 0.000 | Yes |
| **H4b** | MS -> ROE | 0.211 | 0.157 | 1.345 | 0.089 | No |
| **H4c** | MS -> DER | -0.092 | 0.129 | 0.711 | 0.238 | No |

Note: SSB = SC, SA= Shariah audit, SR= Shariah risk, MS= Maqasid Shariah. Sig. p-value <0.05.

Table 4.16 presents the hypothesis testing result for direct effect. The result indicates the relationship between SC and performance (ROA, ROE, and DER) on H1a, H1b, and H1c. The result shows that two hypotheses, H1b and H1c, are supported at p-values 0.050 and 0.001. Secondly, the relationship between Shariah Audit and

performance (ROA, ROE, and DER) on the H2a, H2b, and H2c found that none of the hypotheses was supported, at p-value > 0.05.

Thirdly, the relationship between Shariah Risk and performance (ROA, ROE, and DER) on the H3a, H3b, and H3c. The result indicates that two hypotheses, namely, H3b, and H3c were supported at p-values 0.028 and 0.001. Fourthly, the relationship between Maqasid Shariah and performance (ROA, ROE, and DER) on the H4a, H4b, and H4c results indicate that only H4a was supported at p-value 0.000.

Therefore, the results indicate that H1a, H2a, H2b, H2c, H3a, H4b, and H4c were not supported, indicating no significant association between the variables.

### 4.6.6 PLS Predict Assessment

Shmueli et al. (2019) suggest that the prediction analysis using PLS-Predict can be applied to evaluate the sample prediction. PLSpredict is the assessment that focuses on the model key on the endogenous construct. This assessment requires the researchers to compare the RMSE (or MAE) values with a naïve benchmark. The recommended naïve benchmark (produced by the PLSpredict method) uses a linear regression model (LM) to generate predictions for the manifest variables by running a linear regression of each of the dependent construct's indicators on the indicators of the exogenous latent variables in the PLS path model (Danks & Ray, 2018). When comparing the RMSE (or MAE) values with the LM values, the following guidelines apply (Shmueli et al., 2019):

Rule of Thumb for Path Coefficient

| | | |
|---|---|---|
| 1) | PLS-SEM < LM for none of the indicators | The model lacks predictive power. |
| 2) | PLS-SEM < LM for a minority of the indicators | The model has a low predictive power. |
| 3) | PLS-SEM < LM for a majority of the indicators | The model has a medium predictive power. |
| 4) | PLS-SEM < LM for all indicators | The model has high predictive power. |

Source: Ramayah et al. (2018)

Therefore, the following are the result of the PLS-Predict assessment.

**Table 4.17:** PLS-Predict ($Q^2$ Predict)

| | PLS | | LM | | PLS less LM ($Q^2$ Predict) | |
|---|---|---|---|---|---|---|
| | **RMSE** | **MAE** | **RMSE** | **MAE** | **PLS** | **LM** |
| **BOARD_MEET** | 1.382 | 1.117 | 1.254 | 0.992 | 0.128 | 0.125 |
| **BOARD_IND** | 1.224 | 0.998 | 1.122 | 0.856 | 0.102 | 0.142 |
| **BOARD_MUS** | 0.815 | 0.645 | 0.637 | 0.487 | 0.178 | 0.158 |
| **DER** | 2.807 | 2.117 | 2.884 | 2.289 | -0.077 | -0.172 |
| **ROA** | 0.254 | 0.183 | 0.26 | 0.197 | -0.006 | -0.014 |
| **ROE** | 3.449 | 2.627 | 3.346 | 2.521 | 0.103 | 0.106 |

Table 4.17 shows PLS is lower than LM for the minority of the indicators. Shmueli et al. (2019) suggest that the study model has a high predictive relevance if most LM-MAE values are greater than the PLS-MAE values. On the other hand, if the minority of the LM-MAE values are greater than LM-MAE, the study model has a low predictive power. Thus, based on the result, this study confirms that the model of this study has a low predictive relevance.

### 4.6.7 Mediation Analysis Procedure and Method

Mediation represents a situation in which a mediator variable to some extent absorbs the effect of an exogenous on an endogenous construct in the PLS path model (Hair et al., 2014). There are several methods for mediation effect testing. For instance, Baron and Kenny's approach introduced the causal procedure method for testing the mediation effect. This procedure has several steps to meet as follows:

1) The independent variable (IV) significantly affects the dependent variable (DV) without a mediator.
2) The IV significantly affects the mediator.

3) The mediator has a significant unique effect on the DV.
4) The effect on the DV and IV shrinks upon the addition of the mediator to the model.

However, Preacher and Hayes have criticised the causal procedure by Baron and Kenny. Moreover, several scholars recommend that the direct effect is not to be significant while analysing the mediation. The significance of the direct relationship might not be identified due to the small sample size or other extraneous factors, or it may not have enough power to predict the effect that exists. According to Preacher and Hayes, the mediation method called "Bootstrapping the mediator effect" is used to correct the situation when the mediator effect is not normally distributed. In addition, Hayes (2009), Shrout and Bolger (2002), and Zhao et al. (2010) emphasise that the "Bootstrapping" procedures have been recognised as rigorous and powerful methods to test the effect of the mediator. Therefore, this study applied the current direction in mediation analysis as suggested by Preacher and Hayes (2008), Shrout and Bolger (2002), and Zhao et al. (2010) who suggest that the direct effect is not required to be significant for further analysing the mediation.

However, another essential factor in proving that mediation occurs is that there must be a significant relationship between the mediator (BOD) and the dependent variables (performance). Therefore, since the first condition is not pertinent in this study, according to Preacher and Hayes, further tests for mediation were conducted towards all the dimensions.

Although there are some insignificant relationships in the direct effect hypothesis, this study followed the current direction in mediation analysis based on Preacher and Hayes (2004; 2008) instead of the causal procedure proposed by Baron and Kenny. Therefore, the following discussion is on the analysis between “Mediator and

independent variable (IV)" and between "IV and Mediator" as the second and third step of Baron and Kenny's approach.

Table 4.18 shows that all the relationships between BOD and performance were supported at a p-value < 0.05. The following is the discussion on the mediator that enables the variables to perform this study.

**Table 4.18:** The Relationship between BOD and Performance

| Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|
| **BOD -> ROA** | -0.280 | 0.126 | 2.228 | 0.013 | Yes |
| **BOD -> ROE** | -0.648 | 0.102 | 6.353 | 0.000 | Yes |
| **BOD -> DER** | -0.482 | 0.103 | 4.699 | 0.000 | Yes |

Note: BOD = Board of Director/ Board. Sig. at P-value < 0.05

The hypothesis testing reveals that the BOD has a significant relationship with the performance of Islamic banks. The hypothesis-testing supports the relationship between the BOD and the ROA, ROE, and DER of Islamic banks. Table 4.18 indicates that the BOD plays a significant role in ensuring the performance of the Islamic banks. Therefore, the BOD as a mediator is pertinent in this study.

Next, Table 4.19 illustrates the relationship between Shariah governance and MS with the BOD.

**Table 4.19:** The Relationship between Shariah Governance and Maqasid Shariah on BOD

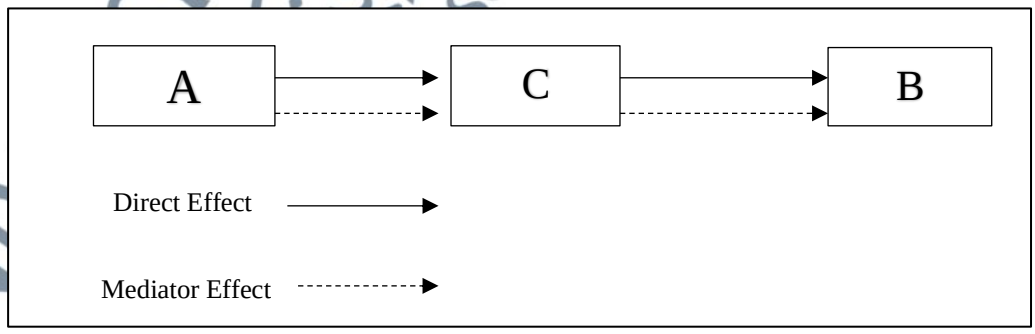
| Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|
| **SC -> Board** | 0.340 | 0.159 | 2.141 | 0.016 | Yes |
| **SA -> Board** | -0.486 | 0.098 | 4.939 | 0.000 | Yes |
| **SR -> Board** | 0.310 | 0.127 | 2.442 | 0.007 | Yes |
| **MS -> Board** | 0.146 | 0.116 | 1.260 | 0.104 | No |

Note: SC = SSB, SA= Shariah audit, SR= Shariah risk, MS= Maqasid Shariah, BOD = Board of Director/ Board. Sig. p-value < 0.05.

Table 4.19 shows the relationship between the Shariah governance (SC, SA, and SR), and Maqasid Shariah disclosure and the BOD. However, Shariah audit has a negative significant relationship with the BOD (std Beta = -0.486, SE = 0.097, T-value = 5.018, and P-Value = 0.00), while SC and Shariah risk are positively significant (std Beta = -0.340, SE = 0.158, T-value = 2.157, and P-Value = 0.016; std Beta = 0.310, SE= 0.125, T-value = 2.485, and P-Value = 0.006). This result is consistent with the empirical findings, which reveal that the risk disclosure quality is positively and significantly associated with the directors' institutional independence (Salem et al., 2019). However, it is revealed that there is no relationship between Maqasid Shariah and BOD.

#### 4.6.7.1 Mediation Assessment approach

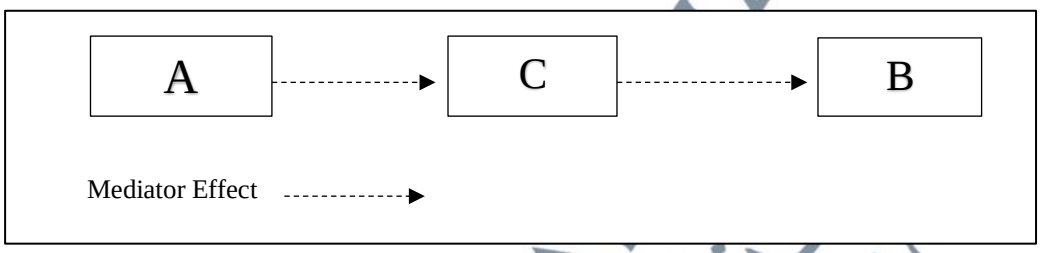
The mediation assessment was conducted based on Preacher and Hayes (2004; 2008) using 5000 samples of basic bootstrapping Bias-Corrected and accelerated (BCa) Boostrap. There are two approaches for theorising the mediation effect: i) Segmentation and ii) Transmittal. The segmentation approach requires the researcher to consider at least three hypotheses; 1) *A* on *C*, 2) *C* on *B*, and 3) *C* mediates the effect of *A* and *C*, as illustrated in the following figure 4.1:




**Source:** Ramayah et al. (2018)

**Figure 4.1:** Segmentation Approach for Theorising Mediation

Moreover, the transmittal approach concentrates on the mediator effect. According to Rungtusanathan et al. (2014), using the transmittal approach, the researcher should develop the hypothesis by indicating that *C* mediates *A*'s effect on *B*, or *A* has a mediator effect on *B* through *C*, without connecting between *A* to *C* and *C* to *B*. The following figure 4.2 illustrates the transmittal approach as applied in this study.




Source: Ramayah et al. (2018)

**Figure 4.2:** Transmittal Approach for Theorising Mediation

Therefore, by using the transmittal approach, Table 4.20 presents the result of the hypothesis testing to test the significant level of mediating effect on the endogenous and exogenous variables.

### 4.6.7.2 Mediation Assessment and Analysis

The mediation assessment was conducted based on Preacher and Hayes (2004; 2008) using 5000 samples of basic bootstrapping Bias-Corrected and accelerated (BCa) Boostrap.

**Table 4.20:** Hypothesis Testing (Mediator)

| Hypothesis | Relationship | Std Beta | Std Error | T-Value | P Values | Confidence interval | | Supported |
|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | |
| **H5.1a** | SC -> BOD -> ROA | -0.095 | 0.062 | 1.540 | 0.062 | -0.226 | -0.014 | No |

| **Table 4.20** ***Cont.*** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **H5.1b** | SC ->BOD -> ROE` | -0.220 | 0.112 | 1.972 | 0.024 | -0.406 | -0.053 | Yes |
| **H5.1c** | SC -> BOD -> DER | -0.164 | 0.086 | 1.910 | 0.028 | -0.335 | -0.062 | Yes |
| **H5.2a** | SA -> BOD -> ROA | 0.136 | 0.064 | 2.135 | 0.016 | 0.051 | 0.269 | Yes |
| **H5.2b** | SA -> BOD -> ROE | 0.315 | 0.079 | 3.969 | 0.000 | 0.211 | 0.471 | Yes |
| **H5.2c** | SA -> BOD -> DER | 0.234 | 0.071 | 3.288 | 0.001 | 0.146 | 0.387 | Yes |
| **H5.3a** | SR -> BOD -> ROA | -0.087 | 0.050 | 1.746 | 0.040 | -0.185 | -0.024 | Yes |
| **H5.3b** | SR -> BOD -> ROE | -0.200 | 0.079 | 2.525 | 0.006 | -0.325 | -0.085 | Yes |
| **H5.3c** | SR -> BOD -> DER | -0.149 | 0.068 | 2.210 | 0.014 | -0.266 | -0.058 | Yes |
| **H6a** | MS -> BOD -> ROA | -0.041 | 0.042 | 0.974 | 0.165 | -0.115 | 0.010 | No |
| **H6b** | MS-> BOD -> ROE | -0.095 | 0.077 | 1.226 | 0.110 | -0.198 | 0.054 | No |
| **H6c** | MS -> BOD -> DER | -0.070 | 0.057 | 1.237 | 0.108 | -0.156 | 0.029 | No |

Note: SC = SSB, SA= Shariah audit, SR= Shariah risk, MS= Maqasid Shariah, BOD = Board of Director/ Board

Table 4.20 presents the hypothesis testing result for the mediator effect. Firstly, the result indicates the mediation effect on the relationship between SC and performance (ROA, ROE, and DER) on H5.1a, H5.1b, and H5.1c. The results show that only H5b and H5c are supported, which indicates that the BOD mediates the relationship between SC and ROE (β = -0.220, t-value = 1.972, p-value = 0.024, BCI LL = -0.406, BCI UL = -0.053) and BOD mediates the relationship between SC and DER (β =0.164, t-value = 1.910, p-value = 0.028, BCI LL -0.335, BCI UL = -0.062), of which BCI LL and BCI UL do not straddle the zero in between indicating that there is mediation (Preacher & Hayes, 2004; 2008). Even though there is mediation on H5a, the result found that it is not significant at p-value < 0.05.

Secondly, the mediation effect on the relationship between SA and performance (ROA, ROE, and DER) on the H5.2a, H5.2b, and H5.2c. The result shows that the hypotheses H5.2a, H5.2b, and H5.2c are statistically significant, which indicates the

BOD mediates the relationship between SA and performance (ROA, ROE, and DER): H5.2a BOD mediates the relationship between SA and ROA (β = 0.136 , t-value = 2.135, p-value = 0.016, BCI LL = 0.051 , BCI UL = 0.269), H5.2b BOD mediates the relationship between SA and ROE (β = 0.315, t-value = 3.969, p-value = 0.000, BCI LL = 0.211, BCI UL = 0.471), and H5.2c BOD mediates the relationship between SA and DER (β = 0.234, t-value = 3.288, p-value = 0.001, BCI LL = 0.146, BCI UL = 0.387). The confidence interval for H5.2a, H5.2b, and H5.2c do not straddle zero indicating that there is mediation.

Thirdly, the mediation effect on the relationship between SR and performance (ROA, ROE, and DER) on the H5.3a, H5.3b, and H5.3c. The result shows that the hypotheses H5.3a, H5.3b, and H5.3c are statistically significant, which indicates that the BOD mediates the relationship between SR and performance (ROA, ROE, and DER): H5.3a BOD mediates the relationship between SR and ROA (β = -0.087, t-value = 1.746, p-value = 0.040, BCI LL = -0.185, BCI UL = -0.024), H5.3b BOD mediates the relationship between SA and ROE (β = -0.200, t-value = 2.525, p-value = 0.006, BCI LL = -0.325, BCI UL = -0.085), and H5.3c BOD mediates the relationship between SR and DER (β = -0.149, t-value = 2.210, p-value = 0.014, BCI LL = -0.266, BCI UL = -0.058). The confidence intervals for H5.3a, H5.3b, and H5.3c do not straddle zero indicating that there is mediation.

Fourthly, the mediation effect on the relationship between MS and performance (ROA, ROE, and DER) on the H6a, H6b, and H6c. The results show that the hypotheses H6a, H6b, and H6c are not supported, which indicates the BOD does not mediate the relationship between MS and performance (ROA, ROE, and DER). The confidence intervals for H6a, H6b, and H6c have straddled zero, indicating no mediation.

### 2.6.7.3 Degree of Mediation

Table 4.21 summarises the hypotheses tested for the mediator effect, which illustrates the degree of mediation.

**Table 4.21:** Degree of Mediation

| Variables | Direct effect (Supported/Not) | | | Mediator (Supported/Not) | | | Degree of Mediation (Fully/ partial/ NO mediation) |
|---|---|---|---|---|---|---|---|
| | (a) ROA | (b) ROE | (c) DER | (a) ROA | (b) ROE | (c) DER | |
| **SC** | No | Yes | Yes | No | Yes | Yes | No [a] Partial [b, c] |
| **SA** | No | No | No | Yes | Yes | Yes | Fully [a,b,c] |
| **SR** | No | Yes | Yes | Yes | Yes | Yes | Full [a] Partial [b,c] |
| **MS** | Yes | No | No | No | No | No | No Mediation [a,b,c] |

## 4.7 Discussion on the Main Finding of Direct Effect

The purpose of this chapter is to discuss the findings presented in the previous section. This study explored four research objectives based on the three research questions of the study, which was to investigate the relationships of SC, SA, SR and MS with the performance of Islamic banks. In addition, this study examined the mediating effect of BODs between the relationship of SC, SA, SR, and MS with the performance of Islamic banks. The discussion in this section is based on the previous studies and the relevant theories as highlighted in this study, following the research questions as presented in Chapter 1.

1) What is the relationship between Shariah Governance (SC, Shariah Audit, Shariah Risk) disclosure to the performance (ROA, ROE, and DER) of Islamic banks?
2) What is the relationship between Maqasid Shariah disclosure and the performance of Islamic banks in Malaysia?

3) Does the BOD (BOD size, BOD's independence, BOD meeting, Muslim in the BOD) mediate the relationship between Shariah governance and Maqasid Shariah with the financial performance?

Therefore, to answer the research question, this study developed the research objectives as presented in Chapter 1.

1) To Investigate the Impact of Shariah Governance on Islamic Banks's Performance.

2) To examine the impact of Maqasid Shariah on Islamic banks' performance.

3) a. To assess the mediation effect of BOD on the relationship between Shariah governance and Islamic banks' performance.

   b. To assess the mediation effect of BOD on the relationship between Maqasid Shariah and Islamic banks' performance.

The following sections is addressed according to these four research objectives and research questions.

### 4.7.1 To Investigate the Impact of Shariah Governance on Islamic Banks's Performance

This study examined the effect of Shariah governance on the performance of Islamic banks (ROA, ROE, DER) to answer Research Question 1.

#### 4.7.1.1 Discussion on the Relationship Between SC and Performance

**Table 4.22:** The Relationship between SC and Performance (H1a, H1b, H1c)

| Hypothesis | Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|---|
| **H1a** | SC -> ROA | -0.209 | 0.174 | 1.192 | 0.117 | No |
| **H1b** | SC -> ROE | 0.229 | 0.139 | 1.648 | 0.050 | Yes |
| **H1c** | SC -> DER | 0.536 | 0.165 | 3.246 | 0.001 | Yes |

Table 4.22 shows the direct relationship between the SC and the performance (ROA, ROE, and DER) of Islamic banks. The following were the research hypotheses:

H1a: There is a significant relationship between SC disclosure and ROA

H1b: There is a significant relationship between SC disclosure and ROE

H1c: There is a significant relationship between SC disclosure and DER

The study found that SC is not associated with ROA, indicating that H1a is not supported, which finding is inconsistent with many previous studies. In contrast, SC is positively associated with ROE and DER, which means that H1b and H1c are supported at a significant level p-value < 0.05. Generally, numerous studies found a significant relationship between SC and the performance of Islamic banks. These findings indicates that SC protect the interest of shareholders and influences the performance of Islamic banks (Ben Abdallah & Bahloul, 2021). Nomran et al. (2017b) revealed that SC characteristics significantly affected the performance of Islamic banks when the total sample was examined. Following the relationship between corporate governance and performance, Srairi (2015) documented a significant association between CGDI, and bank performance measured by ROA and ROE, suggesting that well-governed banks outperform poorly governed banks. This finding is consistent with the finding of this study for the relationship between SC and ROE but inconsistent with SC and ROA.

Firstly, the insignificant relationship of SC with ROA has contradicted the finding of the study conducted by Mollah and Zaman (2015). Meanwhile, a study conducted by Masruki et al. (2018) found that the ROA is associated with SC. They investigated the impact of Shariah supervision, including SC's supervisory or advisory role, on performance. They found that the effect of SC on accounting-based performance is positive when the SC have a supervisory role. Secondly, this study reveals the significant relationship between the SC and the ROE. This result is consistent with Srairi (2015), who found a significant positive relationship but inconsistent with a study by Khanifah et al. (2020) that found no significant effect on ROE.

Thirdly, the finding shows a significant positive association between SC and DER. This result is inconsistent with several studies, namely, Masruki et al. (2018), and other studies, such as Aly et al., Hussainey et al., and Hassan et al. (as cited in Masruki et al., 2018) that found no relationship between the variables.

In banking industry, it is undeniable that the banks are facing with the high DER. DER may differ with the other industries and depending on the characteristic and types of a business (Nurdiwaty & Faisol, 2017). High DER for an industry does not mean bad performance. A high DER can be good because it shows that a firm can easily service its debt obligations via cash flow and is using the leverage to increase equity returns., for instance Solihati (2021) opined that the higher the DER, the higher the financing made by the company to run its business.

DER high impact on improving earnings changes, meant to give effect to the company's profits (Kuswadi, 2005:90). Moreover, concerning the significant relationship between SC and ROE, Heikal et al. (2014); Maverick (2021) opined that if the company can demonstrate that it has sufficient cash flow to service its debt obligations and the leverage is increasing equity returns, that can be a sign of financial

strength. In this case, taking on more debt and increasing the DER boosts the company's ROE. Using debt instead of equity means that the equity account is smaller and the return on equity is higher (Maverick, 2021). Likewise, DER and ROE have an essential role in dividend policy, ultimately maximising stock returns (Nurhikmawaty et al., 2020). For instance, DER indicates how much proportion of the company's capital comes from debt, while ROE measures its ability to generate profits using its capital (Susilowati & Turyanto, 2011). It shows the level of returns generated by the management from the capital provided by the company's owner (Nurhikmawaty, 2020). However, the result of the study on the factors that influence the return of special share in ROA and DER is still inconclusive due to inconsistent findings (Nurhikmawaty, 2020; Nurmasari, 2017; Yudiana & Yadnyana, 2016).

From the theoretical perspective, the finding on the relationship between Shariah governance disclosure and performance can be explained through the Intellectual capital model, which can also be related to the corporate governance theory discussed in this study. The intellectual capital explained that the role of SC, which consisted of the expert and required the related knowledge that will be guide the committee members to perform their duty related to the Shariah matter, might influence the performance of the Islamic banks. The roles of the Shariah committee are also to ensure the entire business activities and operation comply with Shariah, and they are independently performing their role on Shariah matters.

From an Islamic bank perspective, the stewardship theory explains that Islamic banks are motivated to act as stewards to provide the best service (Azmi et al., 2020). This theory always stands with the Shariah principles in serving the customers and the community at the best possible to achieve the Maqasid Shariah. Meanwhile, in Islamic banks, the BOD acts as an intermediation between implementing any policy and

strategy and monitoring any progress on the corporate objective. The Board is acting as an intermediation between the policy and any activities of banks toward the performance. Thus, with the stewardship theory, the BOD and SC will perform the best possible to achieve the Maqasid Shariah and finally impact the banks' performance (Azmi et al., 2020). Management, performing its stewardship function, needs to ensure that compliance to Shariah is being met for the promised Shariah-compliant values to be delivered to the shareholders as the investors' concern with Shariah-compliant values motivates them to invest in the first place.

Meanwhile, the stewardship theory demonstrates a strong link between managers and company success via performance improvement (Yusoff & Alhaji, 2012). They contend that the stewardship theory is linked to performance that meets the needs of stakeholders while balancing governance and performance. Furthermore, stewardship theory prioritises the company's interests by reacting to a conflict situation (Borlea & Achim, 2013).

#### 4.7.1.2 Discussion on the Relationship Between Shariah Audit and Performance

**Table 4.23:** The Relationship between Shariah Audit and Performance (H2a, H2b, H2c)

| Hypothesis | Relationship | Std Beta | Std Error | T-Value | P- Values | Supported |
|---|---|---|---|---|---|---|
| **H2a** | SA -> ROA | 0.209 | 0.171 | 1.225 | 0.110 | **No** |
| **H2b** | SA -> ROE | 0.069 | 0.124 | 0.557 | 0.289 | **No** |
| **H2c** | SA -> DER | -0.019 | 0.149 | 0.126 | 0.450 | **No** |

Table 4.23 shows the hypothesis testing of Shariah risk to the performance (ROA, ROE, and DER) based on the following hypotheses:

H2a: There is a significant relationship between Shariah audit disclosure and ROA.

H2b: There is a significant relationship between Shariah audit disclosure and ROE.

H2c: There is a significant relationship between Shariah audit disclosure and DER.

The finding as shown in Table 4.23 presents an insignificant relationship between Shariah audit and Islamic banks' performance (ROA, ROE, and DER). A study by Masruki et al. (2018) found no significant relationship between ROA and Shariah audit. The result indicates that Islamic banks' performance is not influenced by Shariah Audit disclosure, H2a, H2b, and H2c are not supported at p-value < 0.05 (H2a:0.110, H2b: 0.289, and H2c: 0.450), which is inconsistent with most previous studies. The insignificant relationship between the Shariah audit and the performance of Islamic banks might be due to the Islamic bank not emphasising the Shariah audit disclosure in their report (Masruki et al., 2018). In the context of this study, the element of measure may not be significant for the Islamic banks where some information is not mandatory to disclose in the annual report as it is for the internal use only. The insignificant relationship between Shariah audit and performance might be due to this relationship influenced by other elements, such as the role of BOD. In addition, the result of this study is also insignificant due to the scope of data collection being based on the annual report disclosure. The previous studies were conducted from primary data by collecting information directly from the related persons, such as the managers.

Concerning performance, most scholars argue that an audit in an organisation could improve the firm's performance. Darmadi (2011a) contends that increased corporate disclosure could mitigate the information asymmetry, which consistent with the agency theory that the agency conflict is derived from the information asymmetry between the manager and shareholder. A manager who provides detailed information may influence the decision of their shareholders and other stakeholders. Thus, reporting the related information allows both parties to gain information on the policy and the practices. Some studies argue that the existence of audits in an organisation could improve the performance of the firm. It is supported by Khalid et al. (2017), who states

that competency and work performance are positively significant with an internal Shariah audit effectiveness.

Awdat (2015) revealed that the importance of the internal audit function has positively impacted the firm's financial performance. Similarly, a study conducted by Alaswad and Staniši (2016) found a correlation between audit function and a firm's performance. This correlation plays a significant role in the performance of financial institutions. However, due to several limitations, this finding contradicts the theory and the findings of many previous studies. The limitation might be due to the Shariah audit items that developed based on the SGF and SGPD are not mandatory to disclosed in the annual report that reflect the result of this study.

#### 4.7.1.3 Discussion on the Relationship Between Shariah Risk and Performance

**Table 4.24:** The Relationship between Shariah Risk and Performance (H3a, H3b, H3c)

| Hypothesis | Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|---|
| **H3a** | SR -> ROA | 0.062 | 0.121 | 0.518 | 0.302 | **No** |
| **H3b** | SR -> ROE | -0.236 | 0.119 | 1.916 | 0.028 | **Yes** |
| **H3c** | SR -> DER | -0.376 | 0.114 | 3.173 | 0.001 | **Yes** |

Note: Sig. p-value < 0.05.

Table 4.24 shows the hypothesis testing of Shariah risk and performance (ROA, ROE, and DER) based on the following hypotheses:

H3a: There is a significant relationship between Shariah risk disclosure and ROA of Islamic banks.

H3b: There is a significant relationship between Shariah risk disclosure and ROE of Islamic banks.

H3c: There is a significant relationship between Shariah risk disclosure and the DER of Islamic banks.

Table 4.24 shows the results from the hypothesis testing of Shariah risk and performance (ROA, ROE, and DER). The result found that hypothesis H3a is insignificant at p-value 0.302, which indicates that Shariah risk is not significant with ROA of Islamic banks performance.

In contrast, H3b and H3c were found to have a negative significant association between ROA and ROE at a p-value < 0.05 (H3b: 0.028 and H3c: 0.001). This result is consistent with the study by Abdel Razek (2014), and Elshandidy et al. (2013), where the studies found that risk disclosure has a significant relationship with ROE. This result indicates that the ROA of Islamic banks is not influenced by the Shariah risk disclosure. This result is also consistent with the study by Masruki et al. (2018), who did not find a significant relationship between ROA and Shariah risk. The insignificant relationship also might be due to the Shariah risk items that developed based on the SGF and SGPD are not mandatory to disclosed in the annual report that reflect the result of this study.

Concerning performance, Darmadi (2011a) contends that increased corporate disclosure could mitigate the information asymmetry, which consistent with the agency theory that the agency conflict is derived from the information asymmetry between the manager and shareholder. A manager who provides detailed information may influence the decision of their shareholders and other stakeholders. Thus, reporting the related information allows both parties to gain information on the policy and the practices.

In addition, the stewardship theory, provides a strong relationship between managers and company success through performance improvement (Yusoff & Alhaji, 2012). They argue that the stewardship theory is linked to the performance that meets stakeholders' needs and balances governance and performance. Moreover, stewardship

theory concerns the company's interest as a priority by reacting to the conflict situation (Borlea & Achim, 2013). Secondly, the stakeholder theory argues the right of the stakeholders to participate in the decision-making process (Obid & Naysary, 2014). It concerns the interest of both parties, which are the stakeholders and shareholders (Yusoff & Alhaji, 2012). A study by Rehman et al. (2020) statesd that this theory is a valuable tool for further improving the company's performance. The management can perform their responsibilities as best as possible regardless of their interests.

Furthermore, corporate disclosure might reduce the legitimacy gap. The legitimacy theory describes the social contract between organisations and society by recognising the rights of the public in general, rather than focusing solely on the rights of investors (Yusoff & Alhaji, 2012). In this effort, a company will disclose information about its social activities to the public to strengthen its image as a socially responsible company in order to attract stakeholder groups.

### 4.7.2 To Examine the Impact of Maqasid Shariah on Islamic Banks' performance.

This section discusses the relationship between Maqasid Shariah and the performance of Islamic banks. The second research objective covers hypotheses H4a, H4b, and H4c.

**Table 4.25:** The Relationship between Maqasid Shariah and Performance (H4a, H4b, H4c)

| Hypothesis | Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|---|
| **H4a** | MS -> ROA | 0.443 | 0.132 | 3.363 | 0.000 | Yes |
| **H4b** | MS -> ROE | 0.211 | 0.157 | 1.345 | 0.089 | No |
| **H4c** | MS -> DER | -0.092 | 0.129 | 0.711 | 0.238 | No |

Note: Sig. p-value < 0.05.

Table 4.25 shows the hypothesis testing of Maqasid Shariah and performance (ROA, ROE, and DER). The following were three hypotheses for the Maqasid Shariah and performance:

H4a: There is a significant relationship between Maqasid Shariah and the ROA of Islamic banks.

H4b: There is a significant relationship between Maqasid Shariah and the ROE of Islamic banks.

H4c: There is a significant relationship between Maqasid Shariah and the DER of Islamic banks.

The result of Maqasid Shariah is based on harmonising the elements of CSR or Islamic corporate social responsibility (ICSR) studies in the Islamic banks as the achievements of Maqasid Shariah disclosure. The elements of Maqasid Shariah are in line with the Shariah-compliant system that is the practice of Islamic banks. Maqasid Shariah emphasises social objectives, such as social justice and environmentally friendly and monetary policy. In line with an Islamic worldview based on divine revelations and human reasons, Islamic economics places a collective society welfare beyond personal gains by protecting ownership and ensuring fairness in all economic transactions (Shatnawi, 2020).

In this regard, the organisation, in its effort, organises various activities that benefit society and welfare. The welfare through Maqasid Shariah achievements encourages the company to disclose through their company's report to gain the advantage by disclosing all the activities and the program organised by the company.

The company's report is used as a communication tool in delivering the information regarding the company's achievement and performance towards the public,

according to Mamun et al. (2017), which is consistent with the legitimacy theory. The theory of a contract between an organisation and society depends on the society to achieve its goal (Aslam et al., 2018). As a part of their workers, the environment or natural resource may need them to be used. Therefore, the organisation needs to present its responsibility to the society when sharing natural resources and human resources to achieve its business goal. However, this result is inconsistent with the argument that ICSR is an essential corporate resource that can be a strategic tool to meet the stakeholder's expectations to achieve economic stability (Arshad et al., 2012).

Firstly, the result shows that only the relationship between Maqasid Shariah and ROA (H4a) has a significant relationship. This hypothesis testing reveals that Maqasid Shariah has a significant relationship with performance, which means that Maqasid Shariah disclosure is associated with the ROA of Islamic banks, consistent with the study by Arshad et al. (2012) that found a significant positive association with the firm performance as measured by ROA.

On the other hand, the relationship between Maqasid Shariah and ROE (H4b) and the relationship between Maqasid Shariah and DER (H4c) show an insignificant relationship, which finding contradicts with a study by Arshad et al. (2012). DER and ROE have an essential role in dividend policy, ultimately maximising stock returns (Nurhikmawaty et al., 2020). For instance, DER indicates how much proportion of the company's capital comes from debt, while ROE measures its ability to generate profits using its capital (Susilowati & Turyanto, 2011). It shows the level of returns generated by the management from the capital provided by the company's owner (Nurhikmawaty, 2020). However, the result of the study on the factors that influence the return of special share in ROA and DER is still inconclusive due to inconsistent findings (Nurhikmawaty, 2020; Nurmasari, 2017; Yudiana & Yadnyana, 2016).

Even though ROE and DER are important financial ratios indicators that provide the direction for investors or shareholders to assess a firm's performance, the Maqasid Shariah disclosure might not be an essential information for the shareholders that influence them in their decision. The investor will focus on the matter that might increase their value and what benefits them (Nurhikmawaty et al., 2020). Thus, this finding is contrary with the legitimacy theory explains that Islamic banks need to depend on society and the public to realize their business goals (Zain & Abdullah, 2019). Disclosing the information related to activities, particularly community activities, provides evidence to the public that shows the appreciation and the welfare of an organization. In return, it will strengthen the transparency policy, improve the reputation, and meet the needs and interests of the community. Reporting the bank's activities in the annual report allows the customers to review and evaluate the level of assurance. It clarifies the importance of the banking sector in convincing the stakeholders towards the capability of the institution.

### 4.7.3 Summary on the Discussion of Shariah Governance and Maqasid Shariah on the Performance

This study examined the effect of Shariah governance and Maqasid Shariah disclosure on the performance of Islamic banks (ROA, ROE, DER) to answer Research Question 1.

Concerning the first study objective, this section summarises the discussion on the Shariah governance disclosure and Islamic banks' performance. Firstly, on the relationship between SC and performance, the result found that H1b and H1c are supported, while H1a is not supported. This result indicates that there is a significant relationship between SC with ROE and DER. Secondly, on the relationship between

Shariah audit and performance, the result found no significant relationship between Shariah audit and performance; this indicates that H2a, H2b, and H2c are not supported. Thirdly, on the relationship between Shariah risk and performance, the result found that the relationship between Shariah audit and ROA is not supported. In contrast, the relationship between Shariah risk with ROE and DER is supported.

The insignificant relationship between Shariah governance and financial performance could be explained based on the nature of the study. Many studies have investigated the relationship of Shariah governance and performance of Islamic banks based on the primary data, which is the information obtained directly from the respondents. Since this study constructed the information from annual reports, the banks reports have limited information through the annual reports. The insignificant relationship may also be due to the need for the other elements, such as the role of BOD that might influence the relationship between Shariah governance on the performance of Islamic banks. Shariah governance is an essential element in IFIs as the BNM enforces the requirements. However, some items of Shariah governance in this study are not compulsory to be disclosed in the annual report or published in other companies' reports because several items are only for the bank's guidelines and internal report only. However, a strong governance practice may affect the performance of Islamic banks.

Concerning the second objective, this section discusses the relationship between Maqasid Shariah disclosure and performance. This study reveals that only hypothesis 4a is supported, which indicates the Maqasid Shariah and ROA have a significant relationship. In line with the Islamic principles, the Maqasid Shariah in Islamic banks emphasises the need for communities and welfare internally and externally. Islamic bank holds significant roles to provide the Shariah-compliant product to fulfil the Muslim needs regarding the Maqasid Shariah achievement.

This argument is compatible with the Islamic view, where Islam recommends the concept of giving. Allah SWT also encourages humans to help each other as the Quran says,

> "...And cooperate in righteousness and piety, but do not cooperate in sin and aggression. And fear Allah; indeed, Allah is severe in penalty. (Al-Quran, Al-Maidah 5: 2)[7]

Maqasid Shariah strongly encourages to support people in need through *sadaqah* and *zakat* that do not cause the givers to be poor. Nevertheless, Allah SWT promises to multiply what they are giving to other people.

## 4.8 Discussion on the Main Findings of Mediation Effect

In the previous section (see section 4.7.2 Mediation Analysis Procedure), several methods for mediation effect testing are discussed as a procedure to meet the mediator's requirement in this study.

Table 4.26 shows that all the relationships between BOD and performance are supported at a p-value < 0.05. The following is the discussion on the mediator that enables the variables to perform in this study.

**Table 4.26:** The Relationship between BOD and Performance of Islamic Banks

| Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|
| **BOD -> ROA** | -0.280 | 0.126 | 2.228 | 0.013 | Yes |
| **BOD -> ROE** | -0.648 | 0.102 | 6.353 | 0.000 | Yes |
| **BOD -> DER** | -0.482 | 0.103 | 4.699 | 0.000 | Yes |

Note: BOD = Board of Director/ Board, Sig. p-value <0.05

[7] Al-Quran, Al-Maidah 5: 2.

The significant relationship between mediator and performance indicates that the BOD plays a significant role in ensuring the performance of the Islamic banks. It is consistent with the agency theory, which explains that agency problems might occur when the manager performs the duty to seek their interest rather than achieve the firm's goal. It seems self-interest opportunistic agents must be watched over and controlled (Lewis, 2005). However, Islam always encourages Muslims to be responsible for their duties. For instance, a manager needs to be held accountable to the shareholders and Allah SWT (Abu-Tapanjeh, 2009; Obid & Naysary, 2014b), believing that the Almighty monitors every action of humans. Therefore, every decision should be in line with the knowledge and views of the shareholder. Practising transparency and delivering accurate information can reduce information asymmetry, thereby, will increase the public's trust and number of investors (Obid & Naysary, 2014b), which might improve the company's performance.

Concerning the stewardship theory, from the psychological and sociological perspectives, the steward is entrusted as faithful, influential people, and thus, they are classified as good administrators for resources entrusted (Borlea & Achim, 2013). Therefore, the stewardship theory explains that the board would perform the best to impact the banks' performance (Azmi et al., 2020).

Moreover, MCCG 2012 states that the BOD holds a significant role in realising the excellence of corporate governance practices. The BOD consisting of the BOD independent, BOD meeting, and Muslims in the BOD is consistent with Shatnawi's (2020) study. In addition, he also states that the more diversified a board is in religion, the greater the chance for corporate performance; this may be the critical reason for the positive findings obtained in this study through significant relationships.

The studies on Islamic organisations consistently emphasise that religious background might contribute to the organisation's performance. Shatnawi (2020) revealed that religion influences corporate decisions. Meanwhile, Hassan et al. (2015), in their study on board diversity, state that religious beliefs, customs, rituals, and languages could enhance the firm's value because diversity forces directors explain their ideas logically to board, which leads to a better decision making. A diverse corporate board can do things more creatively or innovatively and always benefit their stakeholders (Hassan et al., 2015). In addition, corporate board diversity improves decision-making, policies, procedures, and business networking (Yusoff, 2010). Following the board's structure, the function of the SC and the implementation of the risk management committee plays an essential role in the performance of the Islamic banking sector, where Srairi (2015) found a significant relationship between ROA and ROE.

Therefore, this finding summarises that the BOD, which consists of BOD independent, BOD meeting, and Muslim in BOD, has influenced the performance of the Islamic banks in Malaysia. In relation, the finding of this study is consistent with the research conducted by Abbadi et al. (2012) and Shatnawi (2020). However, they found an insignificant effect between BOD meetings and performance.

Shatnawi (2020) found a negative relationship between the BOD size with ROA and ROE. However, a positive relationship was found between BOD independence with ROA and ROE. Furthermore, the result confirms no relationship between a BOD meeting and return on assets (ROA) and return on equity (ROE). Finally, his study demonstrates that Muslim directors do not have any relationship with corporate performance, of which the research was conducted in industrial and service companies in Jordan. Therefore, this study was inconsistent with the study conducted by Shatnawi

(2020). The finding may differ because their study was conducted in Jordanian and service companies instead of Islamic banks.

Next, Table 4.27 illustrates the relationship between Shariah governance (SC, SA, and SR) and Maqasid Shariah with the BOD.

**Table 4.27:** The Relationship between Shariah Governance (SC, Shariah Audit, Shariah Risk) and Maqasid Shariah with the BOD

| Relationship | Std Beta | Std Error | T-Value | P Values | Supported |
|---|---|---|---|---|---|
| **SC -> BOD** | 0.340 | 0.159 | 2.141 | 0.016 | Yes |
| **SA -> BOD** | -0.486 | 0.098 | 4.939 | 0.000 | Yes |
| **SR -> BOD** | 0.310 | 0.127 | 2.442 | 0.007 | Yes |
| **MS -> BOD** | 0.146 | 0.116 | 1.260 | 0.104 | No |

Note: BOD = Board of Director/Board. Sig. p-value < 0.05.

Table 4.27 shows the relationships between Shariah governance (SC, SA, and SR) and BOD are statistically significant at p-value < 0.05, while Maqasid Shariah and BOD is not significant at p-value < 0.05. Unlike the conventional practice, the governance in Islamic banks consists of multi-layer governance, namely, Shariah governance and corporate governance (Abdelsalam et al., 2016). Shariah governance leads to the role of SC in governing the Shariah governance towards the Shariah-compliant practices. Meanwhile, corporate governance emphasises the roles of the BOD in governing the entire organisation. Thus, the finding of this study is consistent with the roles of the dual BOD in Islamic banks associated with the performance of Islamic banks (Nathan & Ribière, 2007).

Furthermore, the dual BOD structure strengthens both the moral and legal accountabilities of Islamic bank management. It may reduce the risk of banks, namely, operational risk, financial losses, higher cost risk, liquidity risk, and Shariah non-compliant risk, leading to reputational risk. The non-compliant risk that may trigger the Islamic bank's customers is the main reason Muslims prefer Islamic banks due to their

concern about religious matters (Abdelsalam et al., 2016; Nomran & Haron, 2020). Thus, it is consistent with the empirical findings, which reveal that the risk disclosure quality is positively and significantly associated with the directors' institutional independence (Salem et al., 2019).

The SC has high responsibility and accountability for its role concerning Shariah supervision. For Islamic banking institutions, SC roles are crucial to ensure all the transactions and activities of Islamic banks comply with Shariah, which the authority must approve. Failure of Islamic banks to ensure compliance with the Shariah rules will negatively affect the reputation in the market due to a lack of customers' confidence (Mansour et al., 2020). In relation, the role of SC is consistent with the stakeholder theory that explains the relationship between corporate governance and banking performance (Mohammed & Muhammed, 2017). This theory of corporate governance based on maximising the interests of all stakeholders has proven to be the most efficient in history. Due to its function, it has influenced the success of the company's economy and achieved competitive advantage due to the gaining of people's trust, and consequently, gaining a good reputation in the market (Borlea & Achim, 2013).

In contrast, Maqasid Shariah is positively insignificant associated with BOD, thus, the relationship between Maqasid Shariah and the BOD is not supported (std Beta = 0.146, SE = 0.116, T-value = 1.260, and P-Value = 0.104). Hence, this study hypothesised that there was no relationship between Maqasid Shariah and BOD. This insignificant finding is relevant since the Maqasid Shariah is not mandatory in their practices or reporting. The Islamic banks have an option to highlight in their reports or emphasise this element in their practice.

Therefore, based on these findings, the following section discusses research objectives 3a and 3b.

### 4.8.1 To Assess the Mediation effect of BOD on the Relationship between Shariah Governance and Islamic Banks' Performance

This section discusses the board's function on the relationship between Shariah governance with the performance of Islamic banks in Malaysia. Nine research hypotheses have been developed to meet this research objective.

The discussion on the mediator effect on the relationship between Shariah governance and Islamic banks' performance is presented in Table 4.26a, Table 4.26b, and Table 4.26c.

Table 4.28 presents the result of hypotheses H5.1a, H5.1b, and H5.1c. The section that follows discusses the effect of mediation on the relationship between SC and the performance of Islamic banks.

**Table 4.28:** Mediator (BOD) Effect on the Relationship Between SC and Performance

| Hypothesis | Relationship | Std Beta | Std. Error | t-value | P Values | Confidence Interval (BC) | | Supported/ Mediation |
|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | |
| **H5.1a** | SC -> BOD -> ROA | -0.095 | 0.062 | 1.540 | 0.062 | -0.226 | -0.016 | No |
| **H5.1b** | SC -> BOD -> ROE | -0.220 | 0.112 | 1.972 | 0.024 | - 0.406 | -0.053 | Yes |
| **H5.1c** | SC -> BOD -> DER | -0.164 | 0.086 | 1.910 | 0.028 | -0.335 | -0.062 | Yes |

Note: BOD = Board of Director/Board, Sig. p-value <0.05

The first indirect relationship is concerned with the mediating effect of the BOD on the relationship between SC and the performance (ROA, ROE, and DER). The following were the research hypotheses:

H5.1a: BOD mediates the relationship between SC and ROA.

H5.1b: BOD mediates the relationship between SC and ROE.

H5.1c: BOD mediates the relationship between SC and DER.

Table 4.28 confirms that the relationship between SC and ROA was found not mediated by BOD. This result is expected since the result was not supported by the former. Thus, it was expected not to be supported by the latter. H5.1a is not supported, indicating that the BOD does not mediate the relationship between SC and ROA. The reason why the hypothesis is not supported could be due to the small sample size or the other factor; it may not have enough power to predict the effect (Ramayah et al., 2018). In contrast, the mediation for H5.1b and H5.1c is significant at t-value = 1.987, p-value = 0.023 and t-value = 0.1921, p-value = 0.027, respectively. This significant relationship illustrates that the SC is responsible for decision-making that sanctions or rejects any proposals deemed to be against Shariah. However, Ghayad (2008) states that the management of business operations that positions a board is directly responsible for the SC. Thus, the combination of the SC and board's role as independent decision-making has enabled the Islamic banks to enhance and strengthen their performance, consistent with the intellectual capital model. The BOD will combine the valuable knowledge which can be seen between BOD and the SC. This knowledge is consistent with the board's role in developing good consensus decisions from this information (Fama & Jensen, 1983).

According to Jensen and Meckling (1976), agency problems may occur due to differences of interests between shareholders and management and between the controlling shareholder and minority shareholders in firms with a high ownership concentration (Darmadi, 2013b). A greater attention is essential to the Islamic banks since their operations expose them to more non-compliance risks and weaker institutional environments of emerging markets (Claessens, 2006). The non-compliant elements are the primary concern of the depositor and other customers of Islamic banks. For instance, investment depositors appear to be part of the agency conflicts since they

participate in the profit and loss like the shareholders. Thus, a robust governance system such as Shariah governance is pertinent to protecting their stakeholders' interests and maintaining their confidence.

Similar with the previous discussion on the direct effect (See sec. 4.7.1), in the context of banking industry, the banks are facing with the high DER. DER may differ with the other industries and depending on the characteristic and types of a business (Nurdiwaty & Faisol, 2017). High DER for an industry does not mean bad performance, and it could be good if firm able to service its debt obligations via cash flow and is using the leverage to increase equity returns, for instance Solihati (2021) opined that the higher the DER, the higher the financing made by the company to run its business.

Moreover, concerning the significant relationship between SC and ROE, Heikal et al. (2014); Maverick (2021) opined that if the company can demonstrate that it has sufficient cash flow to service its debt obligations and the leverage is increasing equity returns, that can be a sign of financial strength. In this case, taking on more debt and increasing the DER boosts the company's ROE. Using debt instead of equity means that the equity account is smaller and the return on equity is higher (Maverick, 2021). Likewise, DER and ROE have an essential role in dividend policy, ultimately maximising stock returns (Nurhikmawaty et al., 2020). For instance, DER indicates how much proportion of the company's capital comes from debt, while ROE measures its ability to generate profits using its capital (Susilowati & Turyanto, 2011). It shows the level of returns generated by the management from the capital provided by the company's owner (Nurhikmawaty, 2020). However, the result of the study on the factors that influence the return of special share in ROA and DER is still inconclusive due to inconsistent findings (Nurhikmawaty, 2020; Nurmasari, 2017; Yudiana & Yadnyana, 2016).

**Table 4.29:** Mediator (BOD) Effect on the Relationship between Shariah Audit and Performance

| Hypothesis | Relationship | Std Beta | Std. Error | t-value | P Values | Confidence Interval (BC) | | Supported |
|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | |
| **H5.2a** | SA -> BOD -> ROA | 0.136 | 0.064 | 2.135 | 0.016 | 0.051 | 0.267 | Yes |
| **H5.2b** | SA -> BOD -> ROE | 0.315 | 0.079 | 3.969 | 0.000 | 0.211 | 0.471 | Yes |
| **H5.2c** | SA -> BOD -> DER | 0.234 | 0.071 | 3.288 | 0.001 | 0.146 | 0.387 | Yes |

Note: BOD = Board of Director/ Board, Sig. p-value <0.05

The following indirect relationship is concerned with the mediating effect of the BOD on the relationship between Shariah Audit disclosure and performance (ROA, ROE, and DER). The following were the research hypotheses:

H5.2a: BOD mediates the relationship between Shariah Audit and ROA.

H5.2b: BOD mediates the relationship between Shariah Audit and ROE.

H5.2c: BOD mediates the relationship between Shariah Audit and DER.

The result in Table 4.29 shows the BOD mediate on the relationship between Shariah Audit and performance of Islamic banks is statistically significant at $p < 0.05$, where H5.2a = 0.016, H5.2b = 0.000, and H5.2c = 0.001.

This result is consistent with the agency theory, indicating that the board function and audit committee can reduce an agency conflict through monitoring at the top management, the internal control system, and protecting the quality of financial reports, of which this can result in a better corporate performance (Fama & Jensen, 1983; Shatnawi, 2020). The agency theory emphasises that the information asymmetry may occur between the board and the shareholder. Similarly, the roles of the BOD are significant to ensure that the audit is well performed as expected. Thus, a high disclosure is recommended in an organisation (Harun et. al., 2020), especially Islamic banks, so

that the board can access the information. Moreover, the information can be standardised among the shareholders or investment account holders, creditors, potential customers, and other stakeholders. The stakeholders' interest might be secured by disclosing a set of important information, such as internal control framework, duties and responsibilities of the internal audit division, and internal audit certification held by employees (Darmadi, 2013b).

Moreover, the disclosure of the Shariah audit is consistent with the legitimacy theory, where the stakeholders have the right to access the information that is essential for the decision-making. The Muslims are concerned about the Shariah-compliant matter. Some of them need the information in detail on how the Islamic banks operated and the action to ensure they maintain compliance with Shariah, especially on rectification plans for non-Shariah compliant events. Meanwhile, the roles of the board that consist of the independent members and Muslim members who conduct regular meetings influence the board in making decisions related to the Shariah issues. Shariah Audit is one of the critical parts in Islamic banks that should report directly to the board and senior management (Chapra & Ahmed, 2002). Therefore, the Shariah Audit that provides the independent review or inspection and preparing the information to the stakeholder supported by the board seems to have played significant roles in ensuring the performance of the Islamic banks (Ghazali, 2010). Darmadi (2013b) states that a disclosure on internal control systems in the annual report will enable stakeholders to examine that management have performed their part in overseeing the audit status to ensure all the stakeholders are secure in their decision.

**Table 4.30:** Mediator (BOD) Effect on the Relationship between Shariah Risk and Performance

| Hypothesis | Relationship | Std Beta | Std. Error | t-value | P Values | Confidence Interval (BC) | | Supported |
|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | |
| **H5.3a** | SR -> BOD -> ROA | -0.087 | 0.050 | 1.746 | 0.040 | -0.185 | -0.024 | Yes |
| **H5.3b** | SR -> BOD -> ROE | -0.200 | 0.079 | 2.525 | 0.006 | -0.325 | -0.085 | Yes |
| **H5.3c** | SR -> BOD -> DER | -0.149 | 0.068 | 2.210 | 0.014 | -0.266 | -0.058 | Yes |

Note: SR = Shariah risk, BOD = Board of Director/Board, Sig. *p-value* < 0.05.

The third indirect relationship is concerned with the mediating effect of the BOD on the relationship between Shariah risk and performance (ROA, ROE, and DER) of Islamic Banks. The following were the research hypotheses:

H5.3a: BOD mediates the relationship between Shariah risk and ROA.

H5.3b: BOD mediates the relationship between Shariah risk and ROE.

H5.3c: BOD mediates the relationship between Shariah risk and DER.

Table 4.30 confirms that the BOD mediates the relationship between Shariah risk and performance is supported at a p-value < 0.05. This indirect relationship results show that H5.3a, H5.3b, and H5.3c are supported at p-value = 0.040, p-value = 0.006, and p-value = 0.014. BCI LL and BCI UL indicate a mediation between SR and performance (ROA, ROE, and DER). This significant effect indicates that the Shariah risk relies on the BOD, which mediates the relationship with the performance of Islamic banks. This result also indicates that the Shariah risk in this study is consistent with the risk management position that becomes a governance issue squarely within the board's oversight responsibility. In this oversight role, the boards should satisfy themselves that what the company's senior executives and risk managers' risk management policies and procedures designed and implemented are consistent with its strategy and risk appetite.

Also, they have to ensure that the policies and procedures are functioning as directed and the necessary steps are taken to foster an enterprise-wide culture that supports appropriate risk awareness (Lipton et al., 2018).

### 4.8.2 To Assess the Mediation effect of BOD on the relationship between Maqasid Shariah and Islamic Banks' Performance

The fourth indirect relationship is concerned with the mediating effect of the BOD on the relationship between Maqasid Shariah achievement disclosure and the performance of Islamic banks in Malaysia. The research hypotheses were postulated as follows:

H6a: BOD mediates the relationship between Maqasid Shariah and ROA.

H6b: BOD mediates the relationship between Maqasid Shariah and ROE.

H6c: BOD mediates the relationship between Maqasid Shariah and DER.

**Table 4.31:** Mediator (BOD) Effect on the Relationship between Maqasid Shariah and Performance

| Hypothesis | Relationship | Std Beta | Std. Error | t-value | P Values | Confidence Interval (BC) | | Supported / mediation |
|---|---|---|---|---|---|---|---|---|
| | | | | | | LL | UL | |
| **H6a** | MS -> BOD -> ROA | -0.041 | 0.042 | 0.974 | 0.165 | -0.115 | 0.010 | No |
| **H6b** | MS -> BOD -> ROE | -0.095 | 0.077 | 1.226 | 0.110 | -0.198 | 0.054 | No |
| **H6c** | MS -> BOD -> DER | -0.070 | 0.057 | 1.237 | 0.108 | -0.156 | 0.029 | No |

Note: MS= Maqasid Shariah, BOD = Board of Director, Sig. p-value < 0.05

Table 4.31 confirms that the BOD does not mediate the relationship between Maqasid Shariah and performance, which are hypotheses H6a, H6b, and H6c that are not supported at a p-value < 0.05. This finding is consistent with the direct relationship between Maqasid Shariah and the performance (ROE and DER), except Maqasid Shariah and ROA, which is significant for the direct relationship. This finding is also

expected since the relationship between Maqasid Shariah and BOD is insignificant at a p-value < 0.05, and there is no mediation between Maqasid Shariah and performance (ROA, ROE, and DER). The finding also indicates that the BOD does not influence the relationship between the Maqasid Shariah and Islamic banks' performance. The insignificant relationship may be due to the information of Maqasid Shariah not being mandatory and not mandatory to disclose in the annual report. Thus, the BOD's intervention is not essential to the Maqasid Shariah achievement in Islamic banks. This finding may be due to the BOD being only responsible at the policy level and not for the implementation of Maqasid Shariah. This result may also be due to the board's function not playing a substantial role in the Maqasid Shariah disclosure. This is consistent with Giannarakis (2014), who contends that the board is only responsible for CSR at the policy level and not for the implementation of CSR, which in all possibilities, is the most time-consuming part.

The Islamic and stakeholder perspectives suggest that the non-executive chairman can enhance corporate governance quality to serve all stakeholders' interests, especially to achieve social justice and welfare within the society. However, the board does not seem an essential indicator for measuring the performance of Islamic banks (Bukhair & Rahman, 2015). The legitimacy theory explains the need to disclose the information to gain social interest concerning the organisation's responsibility to society. This theory is consistent with this study when in the first place, the result of this study shows the significant association between Maqasid Shariah and ROA. Conversely, in the second place, the board's function cannot mediate the relationship between Maqasid Shariah and the performance of Islamic banks.

### 4.8.3 Summary of the Discussion of Mediation Effect

This study examined the effect of the mediator (BOD) on the relationship between Shariah governance and Maqasid Shariah with the performance of Islamic banks. The result reveals that the BOD mediates the relationship between Shariah governance (SC, Shariah Audit, and Shariah Risk) disclosure and the performance (ROA, ROE, and DER) except for the SC and ROA. These results also highlight that the BOD plays a significant role in mediating the relationship between Shariah governance disclosure and the performance of Islamic banks. These results indicate that most Islamic banks, as expected, disclose comparatively high levels of Shariah governance as this dimension is a requirement of IFIs. It is noted that other than financial information, the Islamic banks prioritise disclosing the information related to the legal requirement, especially on the Shariah governance.

On the other hand, the BOD does not mediate the relationship between Maqasid Shariah and the performance of Islamic banks. Even though the Maqasid Shariah disclosure's studies have increased academic and industry's achievement, Maqasid Shariah is neither mandatory to be practices by industry nor for disclosing its information. The Maqasid Shariah disclosure is consistent with Islamic corporate social responsibility initiatives reported in its reports and increasingly as communication tools between a company and their relevant stakeholders. Currently, the management of Islamic institutions proactively implements the Maqasid Shariah disclosure to meet the multiple stakeholders' needs. However, the Maqasid Shariah is not mandatory on its practice and disclosure towards its achievement. Hence, this study found that Maqasid Shariah disclosure does not affect Islamic banks' performance directly or indirectly, except the direct relationship between Maqasid Shariah and ROA. Maqasid Shariah's disclosure shows a strong commitment of the banking industry towards the performance

of ROA, causing a positive impact on the financial performance of the Islamic banking industry. However, the result of this study may be influenced by the company's disclosure priority, such as a financial report, legal requirement, and guidelines compared with other dimensions which less disclosed.

## 4.9 Chapter Summary

This chapter analyses the finding and presents the results of the study. The chapter begins with the introduction, followed by the data screening test and normality test. These tests show no missing value detected in the data set—complete 90 sets of the annual report for applicable Islamic banks in Malaysia. The entire data in this study were valid. This study applied the winsorising technique to deal with outliers, and this technique can eliminate the outlier's issue, while some outliers are retained in the data set. The next test conducted in this study was the normality test. This test examines the normality distribution of the data by two statistical components, namely, skewness and kurtosis. By following Kim (2013) for the sample size of greater than 300, the normality depends on the histogram and absolute values of skewness and kurtosis. The above suggestion was applied in this study, it should be noticed that values are in the range of ± 3.29, which is in line with the sample size.

Secondly, this study discusses the descriptive information of variables. This section discusses corporate performance's descriptive information as the dependent variables (ROA, ROE, and DER), SC, Shariah Audit, Shariah Risk, and Maqasid as independent variables (BOD Size, BOD independent, and BOD Muslim) as mediation variables. Thirdly, this study proceeded to the data analysis. To achieve the objective of the current study, two primary methods of analysis, namely, descriptive statistics and a multivariate approach were employed. SmartPLS is the data analysis tool used for a

cross-sectional, time series, economics, and panel data research, and they offer several tests that are not available in other programs. This study applied the Structural Equation Model (SEM) to investigate the relationship between endogenous and exogenous variables. It is a combination of path modelling or multiple regression and factor analysis.

Fourthly, using the SmartPLS 3.0 for data analysis, this section begins with the measurement model assessment that had been carried out to test three primary assessments, namely, Internal consistency, convergent validity, and discriminant validity. The structural model requires assessing collinearity, the significance and relevance of the structural model relationship, examining the coefficient of determination ($R^2$), assessing the effect size, and assessing predictive relevance $Q^2$. Finally, the path coefficients between latent variables were assessed to confirm or disconfirm each hypothesis and the relationship between dependent and independent variables.