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# Perception on Shariah Governance Attributes and Information Technology towards Fraud Prevention and Detection Activities in Malaysian Islamic Banks

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## Abstract

Nowadays, fraud in the financial sector is common and a global issue. The Islamic Financial Institution (IFI) in Malaysia faces the issue despite Shariah-compliance. Fraud and riba' in Islam are forbidden due to being non-Shariah compliant matters. Thus, the study examines the attributes of Shariah governance as an agent for fraud prevention and detection. Data were collected from 16 Islamic Banks with internal auditors and risk analysts as the respondents. The correlation and regression analysis revealed that effective Shariah committee did not impact fraud prevention and detection activities. Conversely, effective internal audit, virtuous senior management, and information technology use positively influenced fraud prevention and detection activities in Islamic Banks in Malaysia. Future research should consider extending the study to other segments of IFIs such as licensed Takaful operators, licensed investment banks or prescribed development financial institutions approved to conduct Islamic financial business. Future research also should consider to incorporate moderating variables such as working experience years of the respondents. Future research can also specifically analyse the use of blockchain technology in fraud prevention and detection activities.

**Keywords:** Fraud Prevention and Detection, Shariah Governance Framework, Information Technology

## Introduction

Fraud is a deception involving elements of representation of false and intentional materials, which is believed to be acted upon and damages the victims. Fraud is divided into two: frauds committed against an organisation and frauds committed on behalf of an organisation (Albrecht et al., 2009). The Association of Certified Fraud Examiners (ACFE) classifies fraud as occupational fraud, categorising fraud into 1) asset misappropriations, 2) corruption and 3) fraudulent financial statements.

The study emphasised fraud committed against the organisation by the directors, managers, or employees on asset misappropriations, corruption, or fraudulent financial

statements. Generally, occupational fraud impacts the organisation the most and cost the victims a large number of funds. Bierstaker et al (2006) found fraudulent financial reporting and asset misappropriation to be major costs for numerous organisations. Numerous efforts were introduced and initiated to combat fraud in every sector and field, specifically in Malaysia. Presently, countries worldwide are promoting Sustainable Development Goals (SDG) comprising 17 strategies.

One of the strategies promotes peace, justice, and strong institutions (SDG, 2015). Specifically, the strategy sets several targets, such as reducing corruption and bribery in all forms. The situation implies the seriousness of the issue and the need for everyone and organisations to ensure fraud prevention and detection activities are effective at all levels for strategy attainment. Moreover, the Malaysian government implemented several initiatives, such as strengthening the role of the Malaysian Anti-Corruption Commission (MACC) by raising awareness to the public on fraud and corruption issues. Additionally, Malaysia revised Section 17A of the MACC Act 2009 to introduce corporate liability provision which was enforced on 1 June 2020.

Fraud prevention is a cost-effective way to reduce losses from frauds (Albrecht et al., 2016). The organisations must bear on the fraud per se and the investigation fees can be costly. Therefore, effective fraud prevention measures should be established to prevent unnecessary spending. Examples of fraud prevention measures in organisations include implementing employee reference checks, maintaining a fraud policy, fraud vulnerability reviews, establishing a telephone hotline for whistleblowing, performing vendor contract reviews, firewall protection, and password protection (Bierstaker et al., 2006).

Fraud detection involves identifying fraud as early as possible once the fraud is committed and occurs when fraud prevention fails (Bolton & Hand, 2002). The types of fraud detection activities are analytical review, discovery sampling, and digital analysis, where Benford's Law is the most used method (Bierstaker et al., 2006; Halbouni et al., 2016). Suryanto and Ridwansyah (2016) stated that the effort to reduce fraud should be separated into phases: the phase of fraud prevention measures, fraud detection and identifying symptoms that commonly occur.

Weak governance led to the collapse of companies as witnessed by history. The situation also occurs in Shariah compliance institutions, such as Islamic banking institutions. For instance, Rahman and Anwar (2014) examined the types of fraud in Islamic Banks in Malaysia and discovered occupational fraud within Islamic Banks. Notably, the highest percentage of fraud incidents was fraudulent statements at 28%, followed by asset misappropriation at 14% and 11% from corruption. Summarily, no organisation is immune from fraud regardless of being an Islamic entity. In 2005, Bank Islam Malaysia Berhad declared substantial losses of RM2.2 billion from the non-performing loan (NPL) due to problematic financing and investments incurred by one of the bank operations. The bank financial scandals were due to mismanagement and poor internal control in the bank subsidiaries overseas. Therefore, poor governance might lead to fraudulent activities, specifically in IFI (Halim & Majid, 2017).

Malaysia is the most developed country in the Islamic banking industry which issued the Shariah Governance Framework (SGF) in 2010 through Bank Negara Malaysia (BNM) and the Shariah Governance Policy in 2019. The SGF 2019 details the primary duty and responsibilities of crucial elements in Shariah governance. Compared to SGF 2010, the document was segmented differently, broadening the scope in Section 2 of SGF 2010. The document replicated the Malaysia Corporate Governance Code 2017, emphasising the position of the

key elements instead of principles as in SGF 2010. Several changes were made to the document to ensure that the accountability requirements of every essential element are enhanced and precisely explained. The updates in the regulatory requirements respond to the changes in the industry, such as changes in regulatory requirements, changes in stakeholders' expectations, and the development of fintech.

A PWC survey in 2018 summarised that most Malaysian organisations did not sufficiently fight fraud issues due to the number of fraud and losses increasing yearly. Furthermore, organisations did not sufficiently invest in information technology to detect fraud (KPMG, 2019). The situation contributes to the massive number of losses due to delays in the detection process where the losses are too late to be salvaged. Consequently, BNM issued the Risk Management in Technology policy in July 2019 to address the issue. The policy encouraged the banks to develop holistic technology to manage fraud and technology risk (KPMG, 2019).

The Global Economic Crime and Fraud Survey 2020: Malaysia Report found that fraud in Malaysian organisations are at worrying levels where 43% of Malaysian respondents experienced fraud or corruption within the last 24 months, a 2% increase from 41% in 2018. The Global Banking Fraud Survey 2020 by KPMG previously reported increased fraud (external fraud total value and volume) and financial scams in banking sectors worldwide. The top four fraud incidents include asset misappropriation, bribery and corruption, customer fraud, and cybercrime.

All categories increased in percentage except asset misappropriation. Corruption and bribery increased by 4% to 18% from 2018, customer fraud increased by 4% to 20% and lastly, cybercrime doubled from 8% to 16% in 2020. Banks remain reactive towards fraud and are not sufficiently investing in fraud risk management (KPMG, 2020). The ACFE Report to The Nations: 2018 Global Study on Occupational Fraud and Abuse mentioned that the main contributor was corruption at 51%, and financial statement fraud was 13%. The use of technology for fraud detection is minimal of at least 1%, and mostly from tips was 47%.

## **Related Research**

### **Fraud Prevention and Detection**

Fraud prevention and detection are crucial activities that all organisations should implement. Fraud prevention involve activities to stop the fraud from happening in the first place, while fraud detection is identifying the fraud incident (Bolton & Hand, 2002). Juhandi et al. (2020) described fraud prevention as a controlled activity that organisations implement, such as establishing policies and procedures, implementing control techniques and employees involvement. Fraud prevention also refers to organisations proactive measures to avoid or stop fraud (Sow et al., 2018). Fraud prevention is effective when organisations emphasise fraud, change behaviour and embrace a good culture (Suryanto & Ridwansyah, 2016). Moreover, organisations are encouraged to focus on two fundamental fraud prevention activities to create and maintain a culture of honesty and high ethics in the organisation and to continuously assess the fraud risk and form responses to mitigate the risks and directly eliminate fraud opportunities (Albrecht et al., 2016). After fraud prevention efforts, an organisation should execute a fraud detection process if any measures placed during fraud prevention fail.

Fraud detection is detecting fraud that has been committed or is being committed. The usual process of fraud detection is identifying the symptoms and matching the signs with fraud indicators (Albrecht et al., 2016). Nonetheless, the detection process requires meticulousness as the chances for the result to be erroneous instead of fraud is high and needs to be reasonably justified (Colbert, 2000). Birul (2019) reported that although numerous variables influence fraud detection activities, corporate governance practice does not impact fraud detection activities. Moreover, the most effective methods of fraud prevention were underutilised (Bierstaker et al., 2006)

### **Shariah Governance and Fraud Prevention and Detection**

The primary goal of Shariah is to promote justice. In Islamic law, Shariah denotes a broad term: the sense of principles and rulings, representing the way to the one God (Allah S.W.T) and purity. Allah S.W.T described in the Quran that Shariah means way. Several verses on Shariah governance encourage Muslims to practice good governance, such as:

*'Indeed We established him upon the earth, and We gave him to everything a way. So he followed a way' (Al-Kahfi 18:84-85)*

*'And We made from among them leaders guiding by Our command when they were patient and [when] they were certain of Our signs' (As-Sadjah 32:24)*

Kamaruddin et al (2020) defined Shariah governance as the relationship between organisations and the stakeholders. Stakeholders include the employees, creditors, customers, government, and society. The description aligns with the principle of Imam Al-Ghazali's Maqasid Shariah framework, which is protecting faith, life, intellect, future generations, and wealth (Julia & Kassim, 2019). The objective is to build harmony with others regarding welfare, interest, or benefit. Shariah governance is a unique process of IFI involving a mechanism used to ensure IFI complies and only operates with Shariah-compliant activities, products, and services (Hidayat et al., 2018). Shariah governance is a system implementing Shariah principles controlled by a religious board overseeing IFI activities based on principles and guidelines. Nonetheless, Kamaruddin et al (2020) mentioned no common understanding among researchers on the general definition of Shariah governance.

Astuti et al (2019) study on fraud prevention and detection found that Shariah governance implementation is unable to curb fraud in IFIs. Out of 11 elements in Shariah governance in the analysis, the results revealed no significant impact on fraud prevention. Meanwhile, the presence and implementation of Shariah governance were not sufficient to lower the number of fraud in the IFIs (In'airat, 2015). Similarly, Islamic Corporate Governance in Indonesia reported no effect on frauds (Lidyah, 2018). Nevertheless, a good application of Shariah governance would reduce fraud in Shariah-compliant banks (Hamzah et al., 2020). Moreover, Wahyuni-TD et al (2021) discovered that good governance principles significantly influence fraud prevention activities in IFI, but not the bank performance directly or indirectly.

### **Hypothesis Development**

#### ***Effective Shariah Committee***

The SGF 2019 highlighted that the Shariah committee holds the responsibility to provide objective and sound advice to the IFI to ensure that the aims and operations, business, affairs and activities comply with Shariah (BNM, 2010). The AAOIFI defines the Shariah committee as an independent body including scholars in Islamic Finance, a crucial element in the Shariah governance system (Hidayat et al., 2018) with the main duties of directing, reviewing, and supervising the IFI activities in ensuring Shariah compliance (Hussain, 2018).

The presence of an effective and independent Shariah committee in fraud prevention and detection reduces the level of aggressive financial reporting and promotes a higher level of voluntary disclosure in financial reporting. An effective Shariah committee provides better transparency on the financial disclosure to gain stakeholder confidence in compliance with Shariah law (Khalid, 2020).

The absence of an independent Shariah committee may raise doubt and worries from the public on the business activities of the IFIs and indirectly impact stakeholder confidence (Hussain, 2018). The lack of an independent Shariah committee could weaken Shariah governance and directly impact the Islamic Bank. Widyanto (2010) proved that the Shariah committee independence reduces fraud caused by insiders in an organisation. Fraud committed by an insider fraudster is classified under occupational fraud. Furthermore, the element of expertise in finance and accounting among the Shariah committee reduces internal fraud in IFI, but not the number of members, meeting attendance, and cross-membership (Anisykurillah et al., 2020). Sow et al (2018) discovered a significant positive relationship between appropriate oversight functions and fraud prevention mechanisms.

Few studies examine the effectiveness of the Shariah committee in fraud prevention and detection activities. Nonetheless, the study refers to the previous findings under the effectiveness of the Indonesian Shariah Supervisory Board (SSB), which is equal to the Shariah committee in Malaysia. Anisykurillah et al (2020) found that although the SSB attributes did not impact fraud reduction, effective expert SSB may aid fraud prevention. Moreover, Suryanto and Ridwansyah (2016) reported that independent and effective SSB significantly impacted fraud prevention activities. Thus, the first proposed study hypothesis is developed as follows:

*H<sub>1</sub>: Effective Shariah committee positively influences fraud prevention and fraud detection activities in Islamic Bank.*

### **Effective Internal Auditor**

A key element in the SGF 2019 is Control Functions comprising Shariah risk management, Shariah review, and Shariah audit. The framework emphasised that an IFI must ensure effective management of Shariah non-compliance risk, which requires performing the functions continuously (BNM, 2019). The IFIs commonly utilise the Internal Audit staff to perform Shariah audit functions and Shariah review due to the familiarisation with the transactions and other pertinent issues within the organisation. Nonetheless, the task segregation between the two functions should be clearly separated (Muhamad Sori et al., 2015a). An effective internal audit function in an organisation might positively affect the control environment and form an effective strategy and internal control (KPMG, 2016).

Feizizadeh (2012) noted that effective internal auditing could strengthen corporate anti-fraud and risk mitigation efforts. Internal audit functions must observe potential schemes and circumstances that might impact the industries and markets organisations serve. An internal auditor must recognise the appropriate measures to detect fraud and assess and examine anti-fraud controls. Sow et al (2018) discovered a significant positive relationship between appropriate internal control and the anti-fraud process with fraud prevention mechanisms. Additionally, Suryanto and Ridwansyah (2016) noted that fraud prevention activities were positively influenced by the competencies of Shariah auditors. Halbouni et al (2016) added that internal auditors hold the most vital role in preventing and detecting fraud in an organisation. The internal auditors' effectiveness in internal control could prevent fraud issues and improve fraud prevention and detection activities.

Handayani and Kawedar (2021) discovered a negative relationship between the effectiveness of internal control and fraud opportunities in an organisation. Therefore, internal auditors as part of the internal control function are crucial in fraud detection and prevention activities (Othman et al., 2015). Hence, the study proposed the second hypothesis as follows:

*H<sub>2</sub>: Effective Internal Audit positively influences fraud prevention and detection activities in Islamic Bank.*

### ***Virtuous Senior Management***

A key element of the SGF 2019 is Senior management. Senior management is the chief executive officer (CEO) or a person who leads the senior management (SGF, 2019). Tone at the top is an ethical environment presented by the leadership of the organisation. The element is crucial in preventing fraud as the organisation leadership behaviour affects the employees. For example, if the tone created by the leaders upholds high ethical values, such as honesty, integrity, and trust, the employees tend to follow and embrace the same values. Conversely, an organisation that neglects good ethics and value increases fraud opportunities among the employees as they feel that ethical behaviour is not important in the organisation (Skilling, 1987).

Mukminin (2018) emphasised that the management must place virtuous higher-level personnel as role models who can practice the Islamic code of ethics and comply with right or wrong activities from a Shariah perspective. Thus, Islamic Banks should establish a lineup of virtuous senior management. Nonetheless, few studies specifically examine the virtuous character of senior management. Therefore, the study fills the gap and contribute to future literature review. Past studies never examined the impact of virtuous senior management on fraud prevention and detection. The virtuous element refers to the senior management character, which is viewed as highly ethical. Virtuous senior management should protect the organisation from perpetrators internally (Mukminin, 2018). Additionally, the study examines Islamic Banks in Malaysia, hence the senior management character is a crucial element. Therefore, the third study hypothesis proposed is as follows:

*H<sub>3</sub>: Virtuous Senior management positively influences fraud prevention and detection activities in Islamic Bank.*

### ***Information Technology and Fraud Prevention and Detection***

The KPMG (2019) suggested that banks must be fast and flexible in responding to new threats and establish new approaches and technologies to predict and prevent fraud. Various ways can detect fraud, such as by observation (surveillance), sudden audits, anonymous tips, legal actions, fraud policies enforcement, and embracing ethics to prevent fraud (Suryanto & Ridwansyah, 2016). Many believe that technology implementation is an excellent measure to prevent the diverse characters of human beings from committing multiple frauds within an organisation (Mukminin, 2018).

Past studies employed information technologies to examine the effectiveness in fraud prevention and detection by listing types of software or technologies used in the internal auditing process or risk management process. For example, software involving virus protection, firewalls, password protection, digital analysis, discovery sampling, data mining filtering software, and financial ratios (Othman et al., 2015; Bierstaker et al., 2006). The latest technology that might effectively prevent fraud is blockchain. The nature of the technology

involves minimal human interaction during the transaction. Hence, fraud can be prevented effectively, internally, or externally in an organisation (Mergan, 2018).

Past studies highlighted that persistent technology use promises highly effective internal auditing functions to improve processes, such as data collection to risk monitoring (Feizizadeh, 2012). Moreover, banks may lower fraud risk with proper implementation and handling of advanced information technology with proper training as a package (Siddiqui & Ahmad, 2013). Hamzah et al. (2020) discovered that information technology use positively influences the number of banking fraud as a medium for fraud prevention and detection. Nevertheless, Halbouni et al. (2016) found no difference in using information technology in fraud prevention and detection.

Juhandi et al (2020) suggested that information technology is useful to aid in fraud prevention and detection, highlighting that most fraud detection methods are reports and external audits. Handayani and Kawedar (2021) noted a positive relationship between technology use for prevention and detection and the number and level of fraud committed by perpetrators. The study suggested that the most effective fraud prevention and detection are information technology use. Therefore, the fourth study hypothesis is as follows:

*H<sub>4</sub>: The use of information technology positive influences fraud prevention and detection activities in Islamic Bank.*

### **Research Theory**

The study used the Stakeholder Theory by (Freeman, 1984). Shariah governance is similar to the Stakeholders model where the stakeholder is accountable for organisation performance. Additionally, the Stakeholders Theory Model is the most suitable corporate governance model for the Islamic banking (Rahajeng, 2012). The theory describes that an organisation can achieve better firm performance by collaborating with the firm and other stakeholders internally and externally (Mohammed & Muhammed, 2017). An organisation is responsible for protecting all rights of relevant parties, including workers, customers, sellers, investors, and local communities. Similarly, the Shariah ruling promotes social order while economic development is permitted and maintained (Islam & Bhuiyan, 2019).

The fundamentals of Islamic Banks are to achieve Maqasid al-Shariah where the objective is to protect and preserve public interests, which is Maslahah in every life aspect and segment (Hurayra, 2015). Introducing the SGF indirectly gains trust and enhances the confidence of various stakeholders in Islamic Banks. Preventive measures were established to protect all stakeholders from any unwanted issues, such as non-compliance of Shariah principles and other issues (Sori et al., 2015b). Thus, the objectives of the Stakeholder Theory and SGF are parallel. Accordingly, the independent variables of the framework are the stakeholders, while the dependent variable is organisational performance.

### **Research Methodology**

The study scope is to analyse the impact of Shariah governance and information technology on fraud prevention and detection activities in Islamic Banks in Malaysia. The target respondents were Islamic Bank Internal Auditors and Risk Analysts. The respondents were selected as they are the component of the SGF and the executors of the framework on the Shariah Compliance and Research Function. Moreover, the respondents were from middle management to working level.



The study applied a proportionate stratified random sampling method to determine the sample size. A convenience sampling method was used to determine the elements of samples based on (Pawirosumarto et al., 2017). The instrument used was a questionnaire adapted from (Halbouni et al., 2016). The study also used an interval five-point Likert type scale. The study collected 74 useable responses for analysis. From the sample selection, the effective response rate was 33.04%. The rate is acceptable according to Sekaran and Bougie (2016), where the response of more than or equal to 30% for an online questionnaire is considered acceptable.

### Research Framework

Figure 1 presents the underlying conceptual framework on the relationship between the dependent variable, which is fraud prevention and detection and elements of Shariah governance components and information technology.

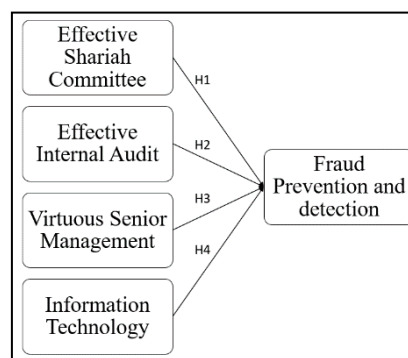


Figure 1: The Study Conceptual Framework

### Findings and Discussion

#### Respondent Description

Out of the 74 responses received, 43 respondents (66.2%) were male, and 19 (33.8%) were female. Regarding the educational background, 44 respondents (59.5%) held a Bachelor Degree, followed by 16 respondents (21.6%) with a Master degree, eight respondents (10.8%) held a Diploma, while the remaining six respondents (8.1%) held Professional Certificates, such as Chartered Institute of Management Accountants (CIMA) and Association of Chartered Certified Accountants (ACCA). For working experience, 24 respondents (32.4%) worked for six to 10 years, 20 respondents (27%) worked for one to five years, 16 respondents (21.6%) worked 11 to 15 years of working experience, while three respondents (4.1%) worked 16 to 20 years. Meanwhile, 45 respondents (60.8%) were from the Internal Audit Department and 29 respondents (39.2%) were from the Risk Management Department. Finally, 64 respondents (86.5%) were under working level and only 10 respondents (13.5%) were from the middle management level.

**Reliability Analysis**

Table 1

*Cronbach's Alpha by Dimension*

Dimension	No of statements	Cronbach's Alpha
Fraud prevention and detection	6	0.884
Effective Shariah committee	4	0.814
Effective internal audit	5	0.693
Virtuous senior management	7	0.682
Information technology	12	0.775

The study used various statements to gauge the respondents' views on the five dimensions: fraud prevention and detection (six statements), effective Shariah committee (four statements), effective internal audit (five statements), virtuous senior management (seven statements), and information technology (12 statements). The use of statements to measure respondents' perceptions requires the statements to be reliable or consistent. The Cronbach's Alpha values were high, ranging from 0.682 (virtuous senior management) to 0.884 (fraud prevention and detection), suggesting that the various statements reliably measure the respondents' perceptions on the five dimensions of the implementation of Shariah governance and information technology in fraud prevention and detection of Islamic Bank in Malaysia. Hair, Black, Babin and Anderson (2010) stated that Cronbach's Alpha scores within the range of > 0.60 to 0.80 are reliable and scores within > 0.80 to 1.0 are very reliable. Thus, the results imply that effective internal audit, virtuous senior management, and information technology fall under reliable range, while effective Shariah committee and fraud prevention and detection fall under very reliable range.

**Normality Test**

Table 2

*Summary Statistics of Skewness and Kurtosis*

Variables	Skewness value	Kurtosis value
Fraud prevention and detection	-0.027	-0.807
Effective Shariah committee	0.491	-0.963
Effective internal audit	0.470	-0.280
Virtuous senior management	0.208	0.650
Information technology	1.299	1.511

Normality test was performed using the Skewness and Kurtosis Test on fraud prevention and detection, effective Shariah committee, effective internal audit, virtuous senior management, and information technology. The skewness and kurtosis values were in the range -2 to 2. Hair, Black, Babin and Anderson (2010) mentioned that the skewness value is acceptable at a range value of [-2, 2], while the acceptable range for kurtosis values is [-3, 3]. Therefore, the mean scores of fraud prevention and detection, effective Shariah committee, effective internal audit, virtuous senior management, and information technology are normally distributed. Consequently, the study used the parametric statistical tool in the following analysis.

**Correlation Analysis**

Table 3

*Summary Statistics of Correlation Analysis between Fraud Prevention and Detection, Shariah Governance, and Information Technology*

Variable	Fraud Prevention and Detection	
	Pearson Coefficient of Correlation ( <i>r</i> )	<i>p</i> -value
Effective Shariah committee	0.066	0.577
Effective internal audit	0.618	0.000**
Virtuous senior management	0.311	0.007**
Information technology	0.532	0.000**

\*\* Significant at 0.01

Correlation analyses were performed to determine the relationships between fraud prevention and detection, effective Shariah committee, effective internal audit, virtuous senior management, and information technology. As the variable values were normally distributed, the analyses were conducted using a parametric correlation tool: Pearson Coefficient Correlation. The result suggested that fraud prevention and detection were positively and moderately correlated with effective internal audit ( $r = 0.618$ ;  $p < 0.01$ ) and information technology ( $r = 0.532$ ;  $p < 0.01$ ). To a moderate extent, an increase in fraud prevention and detection is associated with an increase in effective internal audit and information technology and vice versa. Furthermore, fraud prevention and detection were positively but lowly correlated with virtuous senior management ( $r = 0.311$ ;  $p < 0.01$ ). To a low extent, an increase in fraud prevention and detection was connected to an increase in virtuous senior management and vice versa. Nonetheless, fraud prevention and detection were not related to an effective Shariah committee ( $p > 0.05$ ) (Hinkle et al., 2003).

**Regression Analysis**

Table 4

*Estimated Regression Equation*

Variable	Coefficient	<i>t</i> -value	<i>p</i> -value
Effective Shariah committee	0.131	1.191	0.238
Effective internal audit	0.452	3.426	0.001**
Virtuous senior management	0.314	2.387	0.020*
Information technology	0.383	2.575	0.012*
F	16.294		0.000**
R <sup>2</sup>	0.486		

\*Significant at 0.05

\*\* Significant at 0.01

A regression equation was estimated with the dependent variables of fraud prevention and detection, and independent variables of effective Shariah committee, effective internal audit, virtuous senior management, and information technology. The regression equation was statistically significant at 0.01 ( $p < 0.01$ ), indicating a relationship between fraud prevention and detection and any or all independent variables. The R-square value at 0.486 suggests the

four independent variables as a whole account for 49% of the variation in the dependent variable (fraud prevention and detection). Thus, the impact of effective Shariah committee, effective internal audit, virtuous senior management, and information technology on fraud prevention and detection was moderate.

According to the individual regression coefficient, only the coefficient of effective internal audit, virtuous senior management and information technology were statistically significant at 0.01 ( $p < 0.01$ ) and 0.05 ( $p < 0.05$ ), whereas effective Shariah committee was not significant. The coefficient of effective internal audit (0.452), virtuous senior management (0.314), and information technology (0.383) imply that an increase in effective internal audit, virtuous senior management, and information technology increases fraud prevention and detection. Meanwhile, changes in the effective Shariah committee did not influence fraud prevention and detection.

## Discussion

The study aims to examine whether Shariah governance attributes influences fraud prevention and detection activities and to investigate whether information technology use impacts fraud prevention and detection activities in Islamic Banks in Malaysia.

For the first hypothesis on effective Shariah Committee, the study found no significant influence between effective Shariah Committee and fraud prevention and detection ( $p = 0.05$ ), consistent with (Anisykurlillah et al., 2020). Moreover, the finding confirms that the function of the Shariah committee is up to Shariah resolution only and excludes the bank operations. The committee is only an advisory party but not decision-makers (Muhamad Sori et al., 2015a). Nevertheless, the finding contradicts Sow et al (2018); Widyanto (2010); Suryanto and Ridwansyah (2016), where effective Shariah Committee or oversight function reduces fraud by fraud prevention and detection activities. Thus, H1 is rejected.

For the second hypothesis on effective internal audit, the study found a positive relationship between effective Internal Audit and fraud prevention and detection activities ( $r = 0.618$ ,  $p = 0.01$ ). The findings confirm that effective internal auditors are perceived as effective fraud prevention and detection mechanisms (Zamzami et al., 2016). Meanwhile, Halbouni et al (2016) found that fraud prevention and detection are most impacted by the effectiveness of internal audit functions. Feizizadeh (2012) proved that effective internal auditing might influence anti-fraud and risk mitigation efforts. Hence, H2 is accepted. Nonetheless, the level of relationship is moderately correlated as the r-value ranged between .50 to .70. Therefore, an effective internal auditor is not the main element that impacts fraud prevention and detection.

For the third hypothesis on virtuous senior management, the results revealed that virtuous senior management positively influenced fraud prevention and detection activities. Correspondingly, Mukminin (2018) stated that organisations, particularly Islamic Banks, must establish a line-up of virtuous senior management to overcome fraud issues. The r-value aligns with past descriptive analysis results where the level of relationship is lowly correlated as the value ranged between .30 to .50. Nevertheless, H3 is accepted.

The first research question is whether an effective Shariah governance framework positively influences fraud prevention and detection activities of Islamic Banks in Malaysia. The three hypotheses involving components of the SGF, which is the Shariah Committee, Senior management and internal audit, only two hypotheses were accepted while the other one was rejected. Summarily, not all key organs in Shariah governance creates the same impact on fraud prevention and detection activities. The finding aligns with Astuti, Y Rozali and

Cakhyaneu (2019) where not all key elements in Shariah governance significantly impact fraud prevention and detection activities. Although the key organs are under one organisation and uphold the same objective, the job scope or responsibilities differ.

The last hypothesis concerns information technology use in fraud prevention and detection. The results suggest that fraud prevention and detection were significantly impacted by information technology ( $r = 0.532$ ,  $p = 0.01$ ). The relationship level was moderately positive as the correlation  $r$ -value ranged between 0.50 to 0.70. The findings confirm Bierstaker et al. (2006), Handayani and Kawedar (2021), and Juhandi et al. (2020), where information technology use increased fraud prevention and detection activities. Nevertheless, the finding contradicts Halbouni et al. (2016) and Zamzami et al. (2016), where information technology use did not significantly impact fraud prevention and detection activities. Thus, H4 is accepted.

The above hypothesis relates to the second research question of the study: Does information technology use positively influence fraud prevention and detection activities of Islamic Banks in Malaysia? Summarily, information technology use positively influences fraud prevention and detection activities in Islamic Banks in Malaysia.

### **Conclusions and Recommendations**

The study aims to determine the impact of the role of Shariah governance attributes on fraud prevention and detection activities of Islamic Banks in Malaysia. The study examined the perception of an internal auditor and risk analyst of Islamic Banks in Malaysia based on the effectiveness of the Shariah committee, the effectiveness of the internal auditor, and virtuous senior management. Additionally, the study analysed the impact of fraud prevention and detection based on information technology use. The establishment of Shariah governance mainly emphasises on ensuring that all IFIs in Malaysia are Shariah-compliant concerning the operations activities, investment, and other activities. The compliance secures the stability and credibility of the IFIs per se (Halim & Majid, 2017). The study applied the Stakeholder Theory that explains the relationship between stakeholders and organisational performance. The independent variables of the study act as the stakeholders, and fraud prevention and detection activities refer to the organisation performance of Islamic Banks in Malaysia.

The first objective of the study determines whether Shariah governance implementation influences fraud prevention and detection activities in Islamic Banks in Malaysia. The results revealed that an effective internal auditor and virtuous senior management positively influence fraud prevention and detection activities. Comparatively, an effective Shariah committee did not significantly impact fraud prevention and detection activities. An effective internal auditor positively impacts fraud prevention and detection activities, similar to Halbouni et al (2016) where the internal audit function significantly affect fraud prevention and detection activities. The character of top management is generally important in organisations. The statement is proven by the term 'tone from the top' where a good leader should present a good example to the staff, and the leadership style is an essential element for staff to look up to. Hendriks et al (2020) found that virtuous leadership positively affects work-related wellbeing. Therefore, the study findings confirm that virtuous senior management positively impacts the fraud prevention and detection activities of Islamic Banks.

The second objective examines whether information technology use influences fraud prevention and detection activities in Islamic Banks in Malaysia. The findings suggest a positive influence of information technology use towards fraud prevention and detection

activities. Correspondingly, Juhandi et al (2020); Handayani and Kawedar (2021) found that information technology reduces the number of frauds by increasing fraud prevention and detection activities. Therefore, an organisation can detect fraud early by implementing technology as the main solution instead of manual checking by the bank officer.

### **Study Contributions**

The study contribution involves three parties: the researcher, the industry or practitioner, and policymakers. Firstly, the study could significantly contribute to the rarely addressed topic of financial crimes within Islamic organisations. In Malaysia, past researchers highlight corporate governance rather than Shariah governance. Practitioners could use the results to enhance internal processes and operations to combat fraud in organisations. The IFIs could experience no or low levels of fraud incidents due to the Islamic image the organisations carry. Another aspect enhanced by the industry, such as hiring criteria for management level, is based on experiences and certificates and emphasises the character of the candidates. Additionally, organisations should constantly enhance the systems and technology as technology increases fraud prevention and detection activities.

The findings revealed that fraud exists in Islamic Banks. Therefore, policymakers should improve related or relevant policies to address current loopholes. For example, the SGF may not objectively address fraud incidents in IFIs. Nonetheless, the policies can be enhanced, particularly on the roles and responsibilities of every essential element. Apart from the roles to ensure IFIs are not involved in any non-Shariah compliant activities, the roles should be extended to prevent fraudulent incidents.

### **Study Limitations**

The study limitations include firstly, the population and sampling frame used in the study is not an exact figure representing information on the number of Islamic bank employees in Malaysia. The issue could form the occurrence of coverage error (Sekaran & Bougie, 2016). Nonetheless, the impact of the error is not noteworthy as the researcher may use many types of sampling to solve the issue. Secondly, the respondents are governed by the banker duty of secrecy under the Financial Service Act 2013 since target respondents are in the financial sector. Therefore, the respondents could provide a socially desirable answer to protect themselves and the organisation, despite the disclaimer that the responses are anonymous. Halbouni et al (2016) confirmed that due to the nature of the subject being sensitive for any organisation, the answer provided might not fully reflect the actual picture of the industry.

Lastly, the study excluded moderating variables in the framework. Moderating variable is a third variable impacting the relationship between independent and dependent variables (Sekaran & Bougie, 2016). The study examines the perception of fraud prevention and detection activities. Hence, the perception may be influenced by other factors, such as years of experience, the designation, or other surrounding factors of the respondents. Moreover, determining the truth of an individual perception is complex (Mergan, 2018). The results produced with moderating variables could be closer to the actual picture of the industry when the biases can be eliminated through moderating variables.

Future research should consider extending the study to other segments of IFIs in Malaysia, such as licensed Takaful operators encompassing professional re-Takaful operators, licensed banks, licensed investment banks or prescribed development financial institutions approved to conduct Islamic financial business (BNM, 2010). Secondly, future research should incorporate moderating variables into the research framework. For instance, a moderating

framework in the accounting profession includes accountants, internal auditors, and external auditors. The working experience years of the respondents could also be a moderating variable. Lastly, future research should specifically analyse the use of blockchain technology in fraud prevention and detection activities.

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