

Internal Audit Effectiveness in Insurance and Takaful Companies in Malaysia: A Study of Internal Auditors and Auditees' Perceptions

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ABSTRACT

Manuscript type: Research paper

Purpose: This study examines the views of internal auditors and auditees on factors affecting internal audit effectiveness (IAE) in insurance and takaful companies in Malaysia.

Design/Methodology/Approach: A total of 240 respondents participated in a self-administered survey questionnaire.

Findings: Multiple regression analyses suggests independence as well as the resources of internal audit functions (IAF) and relationship with the audit committee is perceived to affect IAE. However, management support is perceived to be less significant in affecting IAE. Furthermore, independent t-test and eta squared analyses show that respondents perceive the factors that significantly affect IAE differently, with independent internal audits scoring the highest.

Research limitations/Implications: The respondents were only limited to internal auditors and auditees in insurance and takaful companies.

Practical implications: Such empirical evidence is expected to be used by companies, regulators as well as researchers in understanding the prevailing factors affecting IAE in insurance and takaful companies.

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Originality/Value: The value of this study is grounded on limited studies of IAE in the financial industry, specifically insurance and takaful companies, and the analysis of both auditors and auditees' views on the principal factors affecting IAE.

Keywords: Internal audit effectiveness, Audit committee, Internal auditors, Insurance and takaful companies

JEL Classification: L84, M41, M42, M48

1. Introduction

There is now greater recognition of the role internal audit functions (IAF) in supporting businesses. Accordingly, there has been much discussion in the business and auditing fields to obtain greater understanding of the value that it can bring to organisations (Erasmus and Coetzee, 2018). Relevant stakeholders of internal audit (IA) services believe that the added value of IAF is its assurance and consulting roles that can be assessed by way of, among others, its ability to help company to improve business operations and risk management, while maintaining compliance with laws and regulations. Thus, the IAF value is very much conditional upon its effectiveness (IIA, 2016; SC, 2012; Ernst & Young, 2020). The effectiveness of IAF can be described by its ability to achieve its ascribed roles, and there are various factors that may affect this (Roussy et al, 2020). Previous studies find that the characteristics of internal auditors, audit methodology and organisational factors affect internal audit effectiveness (IAE) (Chaveerug, 2011; Mihret et al., 2010). Using a survey questionnaire, a study by Arena and Azzone (2009) identify IA department size as having a significant relationship with IAE. A more recent study by Salehi (2016) showed that IAE is affected by the skills and competencies of internal auditors. Furthermore, some argue that IAF can only be attained because of its independent status (Cohen and Sayag, 2010; Shewamene, 2014). IAE is also affected by the amount of financial support, numbers of IA staff, and relevant training provided by the company (Soh & Martinov-Bennie, 2011; Mustika 2015). Nonetheless, some past research also documents that IAF can be somehow ineffective (Abuazza et al., 2015; Al-Twaijry et al., 2003). Despite the current knowledge on IAE, there are still limited answers (Erasmus & Coetzee, 2018).

The insurance and takaful industries contribute to the Malaysian economy by way of supporting economic growth and development, allocation of investments and enhancement in national income (Aziz

& Kassim, 2020). Despite its significant contribution to the economy, the industry is operating in challenging environments that include regulatory demands and technology and demographic trends (Heale, 2014). Thus, the supporting roles of the IAF in enhancing insurance and takaful companies' performance are increasingly important. In the context of insurance and takaful companies in Malaysia, attention to the roles and effectiveness of IAF have been stipulated in the *Guidelines on Internal Audit Function of Licensed Institutions* (BNM/RH/GL 013-4) issued by Bank Negara Malaysia (BNM). It states the primary roles of IAF as being:

...to assist the board and senior management by providing an independent assessment of the effectiveness of and adherence to the institution's organisational and procedural controls.

[BNM Guidelines, 2010]

Furthermore, BNM has issued its *Guidelines on Minimum Audit Standards for Internal Auditor of Financial Institutions* (BNM/RH/GL 013-1) that aim to strengthen the quality, position and contribution of IAF in improving firm's operations and performance (BNM, 2010). Given the challenges ahead faced by the industry and the importance of roles and functions of the IAF in the industry, IAE warrants further assessment.

According to Alzeban and Gwilliam (2014) and Lenz and Hahn (2015), among the key limitations in IAF literature is the scarcity of research on its effectiveness, and the heavy focus on examining external auditors and chief audit executives' perceptions on factors affecting IAE, which largely do not take into account the perceptions of other stakeholders or interest groups. In addition, Abuazza et al. (2015) highlight a lack of research on internal auditing in developing countries. The present study provides evidence regarding the effects of resources, independence, management support, and internal auditors and audit committee relationships that may influence the IAE of insurance and takaful companies in Malaysia. It also assesses the perceptions of internal auditor and auditee groups. Auditees' views are important because they are the direct recipients of internal audit services, and therefore can indicate auditing quality. The views of auditors are equally important to understand the factors that they themselves perceive as affecting their work performance. Thus, it is essential to understand what both groups see as affecting IAE.

Pursuant to that, this study examines the perception of internal auditors and auditees in insurance and takaful companies on four principal factors that affect IAE in Malaysia, namely: IA resources, IA

independence, management support, and relationship with the audit committee. This study also examines the differences in perception of auditors and auditees on the identified principal factors. Questions remain as to whether internal auditors and other stakeholders, like auditees, agree on what factors affect IAE, because the perceived gap between internal auditors and its stakeholders is broadening (Erasmus & Coetzee, 2018). In addition, BNM has emphasised the importance of IAE in financial institutions in Malaysia, including takaful and insurance companies. However, there is limited research examining the factors affecting IAE from the viewpoints of internal auditors and auditees.

2. Literature Review and Hypotheses Development

2.1 Background of Insurance and Takaful Companies in Malaysia

The insurance industry in Malaysia has made remarkable progress throughout the years, as evidenced by the high market demands for its services. This is mainly due to an increase in awareness of the importance of having assurance for protection. In Malaysia, there are four types of insurance companies: life, general, takaful, reinsurance and retakaful.

Life insurance companies provide life and financial protection to the insured and dependents, while general insurance provides protections against losses of property due to exposure to certain perils. According to Abu Hussin et al. (2014), takaful is a system of Islamic insurance based on the principle of mutual cooperation (*ta'awun*) and donation (*tabarru'*), with risk shared collectively and voluntarily by participants. Takaful operators offer similar services to life and general insurance operators, called family takaful and general takaful. Reinsurance and retakaful companies help insurers spread out their exposure risks. Insurance companies will directly offer services to participants and share the premiums collected from participants to reinsurance for a certain limit of coverage.

The regulation and supervision of insurance and takaful operators are under the purview of BNM. On a yearly basis, BNM issues a report on the sector in its *Financial Stability and Payment Systems Report*. For example, in 2017, the insurance and takaful industry maintained its growth momentum. According to the BNM report, the total premiums and contributions increased by 3.5% to RM63.5 billion (from RM61.3 billion the preceding year), while total insurance and takaful assets increased by 8.1% to RM309 billion (from RM277 billion the preceding year). Moreover, the industry has

maintained an aggregate capital adequacy ratio of 233.8% as at year-end 2017, above the 130% minimum required. The total minimum of RM38.7 billion of capital in excess is higher than the RM37.9 billion recorded the year prior (BNM, 2017).

2.2 *Agency Theory*

The assumptions behind agency theory are related to the separation of power between management and ownership (Fama & Jensen, 1983). In this situation, managers work in the company as agents to provide services on behalf of owners (shareholders), who give the mandate on some decision-making authorities to managers (Jensen & Meckling, 1976). There are possibilities of delinquency or wrongdoing by managers to meet their own interest. Therefore, the existence of IAF is essential to ensure managers carry out their duties accordingly (Endaya & Hanefah, 2013). Principals and agents each may be seen as utility maximisers, with each party working towards its own interests.

This study applies the agency theory as an approach to build a theoretical framework of IAE. This theory has been applied by Shamsuddin et al. (2015) in their study on the competence and independence of IA and management support as factors affecting the effectiveness of IAF. In the context of this study, auditees will be classified as agents of insurance and takaful companies (as principals) as they perform daily business operations. Thus, the IAE will be tested as perceived by both auditors and auditees in accordance to the factors affecting the effectiveness of IAF – IA resources, IA independence, management support and relationship with the audit committee.

2.3 *Internal Audit Effectiveness*

IAF is imperative in supporting companies' operations (Spira & Page, 2003; Arena & Azzone, 2007). Thus, the conceptualisation of IAE becomes crucial to ensure IAF performs its ascribed roles and functions and achieves its intended outcomes. There are various concepts to measure IAE, including IAF effects on both corporate governance practices and companies' operations and performance, as well as the attributes of audit procedures and reports on IAF. For example, research has suggested that IAE can be measured by assessing the extent of IAF support in the improvement of corporate governance practices, including risk management, adequacy and effectiveness of internal control, compliance with laws and regulation

and financial reporting quality (Sarens et al., 2009; Alzeban & Gwilliam 2014).

Meanwhile, other studies have measured IAE by way of assessing the impact of the IAF in the operations and performance of an organisation. In this regard, IAE can be measured by assessing the ability of IAF to identify non-compliance in organisational policies and procedures as well as ensuring effective use of organisational resources (Dittenhofer, 2001; Arena & Azzone, 2009). IAE is also related to improvement and cost savings in the operations of an organisation (Cashell & Aldhizer, 2002). Furthermore, studies have documented that effective IAF can be measured by reviewing the results of operations and programmes that are consistent with organisational goals and objectives (Arena & Azzone, 2009). Other research has measured IAE by considering the quality of internal audit procedures and reports, namely an appropriate audit plan, adequate follow-up audit carried out by internal auditors that ensures corrective action is taken by auditees, and providing findings of audit reports that are considered by the management in their decision-making (Al-Twaijry et al., 2003). Thus, this study employs a measure of IAE based on IAF intended outcomes: the quality of corporate governance, improvement in organisation operation and performance, and the quality of internal audit procedures and reports.

2.4 *Internal Audit Resources*

According to Salehi (2016), the competencies of internal auditors provide assurance and consultation to management, which supports the effectiveness of IAF. These competencies are outlined in the Institute of Internal Auditors's (IIA) *International Professional Practices Framework* (IPPF). Standard 1210 stipulates that they must possess the required skills, experience and knowledge to provide relevant advice and recommendation to management (IIA, 2017). Also, the BNM guidelines recognise these competencies as essential to the proper functioning of IAF in insurance and takaful companies (BNM, 2010).

There are various attributes that have been used to measure internal audit resources, including internal auditors' expertise and knowledge, qualifications, working experience, continuing education, training, communications skills and IAF size. Prior research suggests that the skills and competencies of internal auditors can be improved through continuous training, and it is considered to be essential for IAE (Mat Zain et al., 2006; Soh & Martinov-Bennie, 2011; Lenz et al., 2014). As such, adequate training to improve staff competencies

should be provided to internal auditors through ongoing professional development. Their competencies can be measured by way of assessing their ability to communicate effectively alongside their professional qualifications (Alzeban & Gwilliam, 2014). Erasmus and Coetzee (2018) suggest that IAF with sufficient IA staff enables the successful execution of audit plans. Research shows a positive relationship between a sufficient number of internal auditors with the capability of the IA department to execute their functions effectively (Alzeban & Gwilliam 2014; Soh & Martinov-Bennie 2011; Mihret & Woldeyohannis, 2008). Hence, the first hypothesis is formulated as:

H₁: There is a positive relationship between internal audit resources and IAE.

2.5 Internal Audit Independence

IPPF standard 1100 stipulates that the IA activity must be independent, and that internal auditors must be objective in performing their work (IIA, 2018). The concept emphasises independence as the desired characteristic of the environment in which IAF is performed, which affects IAE (Van Peurse, 2005; Wines, 2012). Stakeholders consider findings and recommendations by independent IAF to be more reliable (Cohen & Sayag, 2010). Hence, the independence of IAF may reflect the positioning of the reporting line in the organisation (Stewart & Subramaniam, 2010).

According to Emmanuel et al. (2013), the position of IAF shall be separate from management. Thus, the independence of IAF is achieved when the reporting responsibility of the IAF falls directly under the boards of directors, audit committee, or other governing bodies.

Belay (2007) conceptualises independence as being when internal auditors are able to perform their audit activities with no influence from management. Furthermore, the independence of IAF is attained when internal auditors have full access to records, departments and employees (Shewamene, 2014). Some research suggests the existence of a conflict of interests in the work of internal auditors, and that the performance of non-audit function may reduce IAE (Goodwin & Yeo, 2001; Erasmus & Coetzee, 2018). Therefore, to evaluate this perception further, this study hypothesises:

H₂: There is a positive relationship between the independence of the internal audit and IAE.

2.6 *Management Support*

For the insurance and takaful industry, the roles of senior management have been delineated under the *BNM Guidelines on IAF of Licensed Institution* (BNM/RH/GL 013-4) (BNM, 2010). It states that senior management should maintain a clear responsibility, authority and reporting relationships with IAF. The roles of IAF are to discharge the mandate given by the board and assist senior management. At the same time, senior management should inform internal auditors on any updates of the company's initiatives, products, developments and any changes in the operation or structure of the company (BNM, 2010).

Research shows that IAE is affected by the level of support (acceptance and appreciation) that is given by the senior management to enable IAF to be carried out effectively (Soh & Martinov-Bennie, 2011; Lenz & Hahn, 2015). Management support, which is reflected in a positive and constructive relationship with IAF, will help eliminate any restrictions in access during the audit. IAF should also be allocated with a sufficient budget. Alzeban and Sawan (2013) find that management support and an adequate budget for IAF allows the IA department to recruit more competent internal auditors, use better audit tools, and provide proper training for satisfactory audits. Management support is also reflected in the involvement and cooperation of management during the audit work and giving reasonable responses to IA findings and recommendations (Mustika; 2015; Drogalas et al., 2015). Thus, this study posits the third hypothesis:

H₃: There is a positive relationship between management support and IAE.

2.7 *Relationship with the Audit Committee*

The audit committee plays a vital oversight role in ensuring IAE by reviewing the audit scope, actions taken by management on audit findings and recommendations, adequacy of IA resources, the appointment of internal auditors, IAF performance evaluations, and remuneration of the chief audit executive (BNM, 2010; Lélis & Pinheiro, 2012). The audit committee is also responsible for supporting and communicating regularly with internal auditors pertaining to issues of irregularities, financial issues and other relevant managerial issues presented to the board of directors (SC, 2012).

Research on IAE shows that the audit committee plays an essential role in ensuring that the internal auditors meet the required

professional standard of independence, integrity, and objectivity (Sharma et al., 2011; Badara & Saidin, 2013). In addition, quality relationships between internal auditors and audit committees are important to avoid the pressure and intimidation from management that may impair their independence, and stifles their ability to disclose discrepancies in management's performance to the board of directors (Imen et al., 2016). Accordingly, an audit committee that has a good relationship with internal auditors can assist the IAF to achieve its organisational status.

The audit committee is expected to support the IAF by way of ensuring the work of internal auditors conforms with IIA standards, by setting clear performance expectations, ensuring adequate IA resources, and getting full support from management (Endaya & Hanefah, 2013). The IAE is significantly increased when the audit committee is actively involved in the activities of IAF (Arena & Azzone, 2009). Since the relationship between internal auditors and audit committees has a significant effect on IAE, the audit committee is required to conduct regular meetings with the chief audit executive to discuss audit matters, including internal audit affairs. Hence, to assess the effect of the relationship between the audit committee and IAE, we hypothesise:

H₄: There is a positive relationship between the audit committee relationship and IAE.

3. Methodology

3.1 Sample Selection and Data Collection

The target populations of this study are internal auditors and auditees working in insurance and takaful companies in Malaysia. There are 44 insurance and takaful operators throughout the country (BNM, 2017; LIAM, 2016). The non-probability convenience sampling method is adopted in this survey due to the time factor and the feasibility of reach-out (Sekaran & Bougie, 2016). This research focuses on the Klang Valley, which includes the capital city of Kuala Lumpur and parts of the state of Selangor. The sample covers the respondents in the Klang Valley which are taken to be representative of the whole of Malaysia (population size $N = 600$). Hence, a total of 300 questionnaires were distributed to the respondents (150 copies to each group), with a response rate of 75% and 85% from internal auditors and auditees respectively. The adequacy of the sample is assessed using the Krejcie and Morgan Table (1970) to

determine the minimum sample size. Under this approach, the minimum sample size is 234 (population size $N = 600$). The total usable sample of internal auditors and auditees was 240 (113 and 127 respectively), which was above the required minimum. To ensure that the demographics of the respondents was distributed equally, the survey targeted individuals of different ages, genders, levels of education, business units, designations and experience. The internal auditor group comprised in-house audit department members, while the auditee group are from various departments of insurance and takaful companies in the Klang Valley. For auditees, the questions were on their involvement during IAs, frequency of IAs, and opinions on the recommendations from internal auditors being adopted by management. For internal auditors, the questions were on the number of internal auditors in their organisation and the professional qualifications obtained to be evaluated.

A self-administered questionnaire was conducted over a period of two months. This questionnaire was chosen because it can be monitored and distributed to the respondents easily, and provide a series of standardised data for further processing and analysis (Saunders et al., 2012). The respondents took about 30 minutes to answer the questionnaires. During the collection of research data, consent was secured from all respondents; no one was forced to complete the survey.

3.1.1 Pilot Study

A pilot study was conducted before the actual study took place. The main purpose was to ensure that the research instruments were valid for the intended research and ensure the level of understanding to avoid any difficulties for respondents. In addition, the pilot study was conducted to evaluate statistical variability, which aims to improve the study design before the main study. The participants for this pilot study were 30 respondents – 15 internal auditors and 15 auditees. The pilot study was performed via Cronbach's alpha test of reliability to evaluate if the survey questions are reliable. The results of the reliability test show that Cronbach's alpha values for all variables are in the range of 0.849 to 0.969 – i.e., above 0.7, as supported by Malhotra (2010) – thereby proving that the questionnaire is reliable. Furthermore, the respondents also provided positive feedback, which led to significant improvements in the construction of not just the questionnaire, but the study as well.

3.2 Variables Measurement and Factor Loading

Research instruments by Alzeban and Gwilliam (2014) and Shamsuddin et al. (2015) were adopted to measure the independent and dependent variables of the study. Table 1 summaries the operationalisation of all variables and illustrates factor loading for 44 statements and Cronbach's alpha for principal factors, aimed at testing the validity and reliability of the scales respectively. The results from Table 1 show factor loadings for all items for each of the variables are all above 0.7 as well as that the Cronbach's alpha values for all variables are above 0.7 (supported by Pallant, 2013; Sekaran & Bougie, 2016).

Table 1: Measurements of Variables and Factor Loadings

Item No	Factors	Items Code	Items Details	Loading
1		IAE-1	Improves the organisational performance.	.798
2		IAE-2	Reviews operations and programs to ascertain whether results are consistent with established organisational objectives and goals.	.849
3		IAE-3	Determines the adequacy and effectiveness of the organisation's system of internal accounting and operating controls.	.851
4		IAE-4	Reviews the accuracy and reliability of financial reports.	.831
5	Internal Audit Effectiveness	IAE-5	Reviews the compliance with applicable external laws, and regulations.	.886
6		IAE-6	Covers issues related to process improvements and cost savings in the operations of the organisation.	.848
7		IAE-7	Evaluates and improves the effectiveness of risk management.	.878
8		IAE-8	Provides recommendations for improvements to the internal control system where appropriate.	.893
9		IAE-9	Provides adequate follow-up to make sure that appropriate corrective action is taken and effective.	.866
10		IAE-10	Develops appropriate annual plan to cover the most risk area.	.817

Item No	Factors	Items Code	Items Details	Loading
11		IAE-11	Provides the audit reports which highly considered for decision making and internal controls by the management.	.848
12		IAE-12	Effectively identify and report any non-compliance activities with my office's policies and procedures.	.859
13		IAE-13	Reviews the economical, effective and efficient use of resources.	.747
14		IAE-14	Improves organisational productions	.655
15		IAR-1	Having sufficient, proficient, and knowledgeable skills to carry out their job.	.769
16		IAR-2	Hold appropriate professional certification/qualification.	.754
17		IAR-3	Possess sufficient working experience to understand the organisation system.	.785
18	Internal Audit Resources	IAR-4	Undergo appropriate program of continuing education and professional development.	.696
19		IAR-5	Undergo appropriate training.	.754
20		IAR-6	Communicate effectively with auditees.	.764
21		IAR-7	Enough to successfully carry out its duties and responsibilities.	.695
22		IIA-1	Sufficiently independent to perform their professional obligations and duties.	.432
23		IIA -2	Reports to a level within the organisation that allows the internal audit to fulfil its responsibilities.	.414
24		IIA -3	Direct reports to Audit Committee and Board of Directors.	.406
25	Independence of Internal Audit	IIA -4	Rarely present conflict of interest in the work of internal auditors.	.649
26		IIA -5	Rarely face interference by management while they conduct their work.	.763
27		IIA -6	Has free access to all departments and employees in the organisation.	.595
28		IIA -7	Has not requested to perform non-audit function.	.728

Item No	Factors	Items Code	Items Details	Loading
29	Management Support	MS-1	Support internal audit to perform its duties and responsibilities.	.825
30		MS -2	Involve in the internal audit plan.	.718
31		MS -3	Have been provided with sufficient, reliable and relevant audit recommendations by internal audit.	.733
32		MS -4	Provide reasonable response to internal audit findings/reports.	.815
33		MS -5	Provide sufficient budget to Internal Audit Department to successfully carry out its duties and responsibilities.	.782
34		MS -6	Provide full access to records and information need by Internal Auditors in conducting audits.	.804
35		MS -7	Give full cooperation to Internal Auditors during the audit commencement.	.815
36		MS -8	Does not acknowledge the Internal Audit function as a value-adding service.	.785
37	Audit Committee Relationship with Internal Audit	RAC-1	Reviews and analysis the scope and activities of the internal audit function.	.817
38		RAC -2	Ensures the implementation of the internal audit recommendations.	.822
39		RAC -3	Enhances the independence of internal audit.	.819
40		RAC -4	Evaluates the internal audit performance.	.781
41		RAC -5	Reviews the results of internal audit findings regarding internal control.	.858
42		RAC -6	Reviews the result of internal audit findings regarding compliance with laws/regulations.	.873
43		RAC -7	Reviews the result of internal audit findings regarding compliance with financial reporting.	.776
44		RAC -8	Reviews the internal audit in involvement in risk management.	.715

3.2.1 Model Specifications

From the previous literature (Mihret & Yisman, 2007; Cohen & Sayag, 2010; Arena & Azzone, 2007, 2009; Alzeban & Gwilliam, 2014 and Shamsuddin et al., 2015), the model ordinary least squares (OLS) assumptions of linear regression were tested prior to carrying out a multiple regression analysis. The tests include a collinearity test, reliability test and normality test. The multiple regression analysis was performed to test the hypotheses formulated from the four factors identified: IA resources, IA independence, management support and relationship with the audit committee (as the independent variables) on IAE (as the dependent variable). The basic OLS regression model is shown below:

$$IAE = \alpha + \beta_1 IAR + \beta_2 IIA + \beta_3 MS + \beta_4 RAC$$

Where,

IAE	The effectiveness of IAF in insurance and takaful company
IAR	Internal audit resources
IIA	Internal audit independence
RAC	Relationship with the audit committee
α	A constant, representing the effectiveness of the internal audit when every independent variable is zero.
$\beta_1 - \beta_4$	The coefficient, in which every marginal change in variables on IAE affects corresponding

From the constructed regression equations for the study, the standardised coefficients (beta values) illustrate the contribution of each independent variable in explaining and reflecting the variance in the dependent variables (Pallant, 2013).

4. Findings

4.1 Demographic Information of Respondents

Demographic information in Table 2 shows the majority of the respondents for the auditor group is male and aged above 41 years old. Most of the internal auditors have over 15 years' experience (32.7%) and between six to 10 years' experience (31.9%). This shows that the majority of auditors have adequate experience in their work.

Table 2: Demographic profile of the respondents

Demographic questions		Response			
		Auditors		Auditees	
		Frequency	%	Frequency	%
Gender	Male	60	53.1	58	45.7
	Female	53	46.9	69	54.3
	Total	113	100	127	100
Age	20-25	8	7.1	15	11.8
	26-30	22	19.5	22	17.3
	31-35	25	22.1	30	23.6
	36-40	19	16.8	30	23.6
	41 and above	39	34.5	30	23.6
	Total	113	100	127	100
Ethnicity	Malay	92	81.4	118	92.9
	Chinese	14	12.4	6	4.7
	India	7	6.2	2	1.6
	Other	-	-	1	0.8
	Total	113	100	127	100
Level of education	Secondary	-	-	7	5.5
	Diploma	3	2.7	18	14.2
	Bachelor's degree	90	79.6	81	63.8
	Master's degree	19	16.8	21	16.5
	PhD	1	0.9	-	-
	Total	113	100	127	100
Designation	Senior manager and above	14	12.4	8	6.3
	Manager	36	31.9	19	15.0
	Assistant manager	16	14.2	25	19.7
	Senior executive	7	6.2	9	7.1
	Executive	40	35.4	60	47.2
	Clerical	-	-	6	4.7
	Total	113	100	127	100
Years of experience	Less than 1 year	7	6.2	7	5.5
	1-5 years	13	11.5	24	18.9
	6-10 years	36	31.9	33	26.0
	11-15 years	20	17.7	28	22.0
	More than 15 years	37	32.7	35	27.6
	Total	113	100	127	100

As for the education level, the majority of auditors have a Bachelor's degree (79.6%), with just three auditors with a diploma certificate (2.7%). For the designation of auditors, the majority are executives (35.4%), and none in clerical positions. The demographic profile for auditees was also quite similar to the auditors, except for the respondents' gender, age and working experience. The majority of the respondents are female (54.3%) and aged 31 and above, with more than 15 years' experience. Similar to the auditors' respondents, 92.9% of the respondents were Malay, 63.8% have a Bachelor's degree and 47.2% are in executive positions.

Table 3 describes the number of auditors in the respondents' company from less than five auditors to more than 20. The highest score for this question is 27.4%, where the respondents acknowledged that their company has more than 20 internal auditors. By having the highest score of frequency, it shows that most of the insurance and takaful companies have adequate internal auditors to perform their functions. Nearly 30% of the respondents possess professional qualifications, while about 52% indicated that they are not professionally qualified.

Table 3: Additional questions to be answered by auditors

	Auditors' responses	Frequency	%
No of auditors in the IA department	Less than 5	11	9.7
	6-10	26	23.0
	11-15	28	24.8
	16-20	13	11.5
	More than 20	35	31.0
	Total	113	100
Professional qualification	Certified Internal Audit (CIA)	9	8.0
	Certified Information System Auditor (CISA)	9	8.0
	ACCA/CPA	9	8.0
	Certified Risk Management Auditor (CRMA)	1	0.9
	None	67	59.3
	Others	11	9.7
	More than 1	7	6.2
	Total	113	100

Most of the respondents work in business operations departments (Table 4). These include underwriting, claims, policy servicing and agency support. These departments are pillars in all insurance and takaful companies. The questions related to the auditees' direct involvement with internal auditors during the audit engagement showed that about 70% of the respondents have liaised with internal auditors.

As many as 81.1% of respondents affirmed that the audit had been conducted in their department every year. In insurance and takaful companies, the audit should comply with BNM guidelines (2010) under BNM/RH/GL 013-4, paragraph 7 on audit methodology and practices. This guideline stipulates that a risk-based audit approach be employed by the IAF because this will allow for the auditing of critical areas that would substantiate the selection of the highest priority audit assignments and its inclusion in the annual audit plan.¹ The risk assessment approach is as an initial and broad identification of auditable areas.

A higher number of auditees agreed that the audit recommendations are always (40.2%) and often (37.8%) implemented in their department. This response is consistent with a study by Mihret et al. (2010), which suggests that IAE is related to its contribution to the performance of companies that can be assessed based on the degree to which management undertakes actions to improve its business operations based on the internal auditor's findings and recommendations.

¹ IIA Standard 2010-Planning requires that the chief audit executive must establish a risk-based plan to determine the priorities of the internal audit activity, consistent with the organisation's goals.

Table 4: Additional questions to be answered by auditees

	Statements	Frequency	%
Auditee department	Finance/Investment	19	15.0
	Administration/Human resource	16	12.6
	Actuarial	23	18.1
	Business operations (i.e., underwriting, claims and etc.)	28	22.0
	Support Department (i.e., customer service, IT and etc.)	14	11.0
	Marketing	10	7.9
	Oversight function (i.e., risk management and compliance)	16	12.6
	Others:	1	0.8
	Total	127	100
Direct involvement with internal auditor	Yes	90	70.1
	No	37	29.9
	Total	127	100
Frequencies of audit	Every year	103	81.1
	Once every 2 years	15	11.8
	Rarely	5	3.9
	Never	4	3.1
	Total	127	100
Implementation of audit recommendation	Always	51	40.2
	Often	48	37.8
	Sometimes	23	18.1
	Rarely	4	3.1
	Never	1	0.8
	Total	127	100

4.2 Correlation analysis

A correlation analysis was conducted to describe the strength and direction of the linear relationship between two variables, while the Pearson correlation is used to explore the strength of relationship between two continuous variables (Pallant, 2007). As suggested by a few scholars (Pallant, 2007; Tabachnick & Fidell, 2001), the correlation between each of the independent variables should be checked so that it is not too high. If the variables are too highly correlated, for instance, above 0.7 in the same analysis, we may need to consider

omitting one of the variables or develop a composite variable from the scores of the two highly correlated variables (Pallant, 2007; Tabachnick & Fidell, 2001). From Table 5, the result of Pearson correlation involving each variable can be identified within a range of between -1 and 1. The relationship between the variables is positively correlated, and the strength of the relationship is not too strong, as it ranges from 0.318 to 0.639. Thus, there is no multicollinearity issue found in this study.

Table 5: Pearson correlation analysis

	IAR	IIA	MS	RAC	IAE
Internal audit resources (IAR)					
Correlation	1				
Sig. (2-tailed)					
N	240				
Independence of internal audit (IIA)					
Correlation	.360**	1			
Sig. (2-tailed)	.000				
N	240	240			
Management support (MS)					
Correlation	.639**	.331**	1		
Sig. (2-tailed)	.000	.000			
N	240	240	240		
Relationship with audit committee (RAC)					
Correlation	.365**	.563**	.318**	1	
Sig. (2-tailed)	.000	.000	.000		
N	240	240	240	240	
Internal audit effectiveness (IAE)					
Correlation	.260**	.380**	.152*	.477**	1
Sig. (2-tailed)	.000	.000	.018	.000	
N	240	240	240	240	240

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4.3 Hypotheses Testing

The following hypotheses were tested to identify principal factors affecting IAE. The regression analysis results are summarised in Table 6. The hypotheses analysis indicates that three hypotheses,

i.e., H1, H2, H4, are supported ($\beta = 0.1179$, $\beta = 0.250$ and $\beta = 0.225$) and significantly related to IAE with ($p < 0.05$) level of confidence. However, the third hypothesis, H3, is rejected as it shows a negative effect ($\beta = -0.109$) and does not significantly affect IAE as the p-value is greater than 5%. The results of the hypotheses tested show some argument from similar previous studies, such as Cohen and Sayag (2010), Alzeban and William (2014), and Shamsuddin et al. (2015). Further discussion for each of the hypotheses test results shown in Section 4.5.

Table 6: Hypotheses testing

Hypothesis	Beta Coefficient, β	P-value	Decision
H1	0.179	0.022	Supported
H2	0.250	0.000	Supported
H3	-0.109	0.159	Not supported
H4	0.225	0.000	Supported

4.4 Independent T-Test

In this study, the independent samples t-test was carried out to evaluate the mean score between auditors and auditees on their perception of significant factors affecting IAE (see Table 7). Additionally, the eta squared was conducted to evaluate the difference in the perceptions of these two groups.

Table 7: Summary results of independent t-test

Item	Group	Mean	SD	Levene's test for equality of variances		t-test for equality of means				
				F	Sig.	t	df	Sig. (2-tailed)	Mean diff.	Std. error diff.
IAR	Auditor	3.800	0.669	5.990	.015	4.403	238	.000**	.41893	.09515
	Auditee	3.381	0.791							
IIA	Auditor	3.901	0.564	.619	.432	5.106	238	.000**	.35808	.07014
	Auditee	3.543	0.523							
MS	Auditor	3.753	0.715	.702	.403	.409	238	.683	.03974	.09726
	Auditee	3.714	0.784							
RAC	Auditor	4.052	0.697	.009	.924	3.663	238	.000**	.30888	.08432
	Auditee	3.743	0.610							

**Significant at $p < 0.05$

The independent t-test for equality of means under the two-tailed columns shows there were significant differences ($p < 0.05$) on the perceptions of auditors and auditees on the effectiveness of IAF for internal audit resources ($t = 4.403$, $p = 0.00$), independence of internal audit ($t = 5.106$, $p = 0.00$), and relationship with the audit committee ($t = 3.663$, $p = 0.00$). The results indicate that both auditors and auditees have different perceptions on the impact of IA resources, IA independence and relationship with the audit committee on IAE. This shows some contradiction on management support. There was no significant difference in management support towards the perceptions of auditors and auditees on the effectiveness of IAF ($t = 0.409$, $p = 0.683$). The results indicate that both auditors and auditees agree on the impact of management support and IAE. This study also assessed the differentiation of effect size on the perceptions of auditors and auditees on each variable with the effectiveness of IAF calculated using the eta squared. Therefore, with N_1 , Auditors = 113, N_2 , Auditees = 127, the eta squared t is computed as follows:

$$\text{Eta squared} = \frac{t^2}{t^2 + (N_1 + N_2 - 2)}$$

According to Cohen (1988), the effect size for eta square of 0.010 is small, 0.059 is medium, and 0.138 is large. Table 8 shows the different effect sizes of each variable. The computation result of eta square on the perceptions of auditors and auditees on IA independence shows a large effect size (eta squared of 0.138), followed by IA resources and relationship with the audit committee, with medium effect (eta squared of 0.059), and the management support, with a small effect (eta squared of 0.010). From the above results, it can be concluded that there are different effects on internal audit resources, independence of internal audit, management support and relationship with the audit committee on IAE.

Table 8: Summary eta squared results of independent t-test

Variables	t	Eta squared, t^2	Effect Size
IA resources	4.403	0.0753	medium
Independence of IA	5.106	0.0987	large
Management support	0.409	0.0007	small
Relationship with audit committee	3.663	0.0534	medium

4.5 Discussion of Findings

The result of the hypothesis testing supports H1, which states that IA resources have an effect on IAE ($\beta = 0.179$, $p < 0.05$). It shows that the IA resources contribute significantly to IAE. The results are similar to past studies that showed the importance of internal auditors who possessed the required knowledge, skills, experience and competencies, together with academic or professional qualifications, and of effective communicators on internal auditors' work performance (Alzeban & Gwillian, 2014). Similarly, Mustika (2015) finds that incompetence may affect IAE. The size of the IA department is also found to have an effect on IAE.

H2 of this study is supported, indicating the positive effects of IA independence on IAE ($\beta = 0.250$, $p < 0.05$). The results indicate that it is crucial for IAF to stay independent to remain effective. This corresponds to past studies that find that greater auditor independence leads to greater IAE (Cohen & Sayag, 2010; Alzeban & Gwilliam, 2014).

H3 of the study is not supported by the regression analysis and as such is rejected ($\beta = -0.109$, $p > 0.05$). Despite many previous studies, such as Cohen and Sayag (2010) and Alzeban and Gwilliam (2014) documenting the positive effects of management support on IAE, the findings of this study show that the effects are insignificant. Mustika (2015) also finds that management support has an insignificant effect on IAE. As deliberated by past researchers, some managers believe that one of the roles of the IAF is to highlight deficiencies in management work that causes a lack of support, thus contributing to the insignificant p-value ($p = 0.159$).

The contradictory results could be because IAF in insurance and takaful companies report directly to the audit committee. It has been stipulated under item 2.5 of the BNM guidelines that the areas under the audit committee's purview include the review of audit scope, audit findings and actions taken by management, appointment, performance evaluation and remuneration of the chief internal auditors, as well as reviewing the effectiveness of internal controls and risk management processes (2010). The audit committee's oversight functions also include overseeing the adequacy of resources and remuneration of the internal auditor and ensuring independence status of the IAF. Thus, the audit committee plays a more significant role in ensuring IAE than management.

The regression result supports H4, which states that the relationship between the internal audit and audit committee has a significant impact on the IAE ($\beta = 0.225$, $p < 0.05$). This indicates

that respondents believe that the relationship between the internal audit and the audit committee affects the effectiveness of the IAF. Moreover, IAF will be stronger with the support and involvement of the audit committee, as required by BNM for insurance and takaful companies. This finding is consistent with Arena and Azzone (2009) who found a positive impact of a close relationship between internal auditors and audit committees on IAE. Likewise, Munro and Stewart (2011) state that internal auditors can play a more effective role if they work in a strong business risk environment and have a strong relationship with the audit committee.

The overall findings show the consistency of the results between multiple regression analyses and independent t-tests. Internal audit resources, independence of internal audit, and relationship with the audit committee are significantly related to the effectiveness of IAF, while management support is insignificantly related. The result, also consistent with the BNM guidelines (2010), should provide oversight on the adequacy of resources and remuneration of internal auditors. Thus, management has a less significant impact on the effectiveness of IAF unless they continuously support the IAF as directed by the audit committee.

Finally, the results demonstrate that IAF in insurance and takaful companies are perceived to be effective from the point of view of auditors and auditees. IAF seems to be important in such companies in Malaysia as their roles and performance are closely monitored by BNM. As such, the existence of effective IAF by executing certain factors—such as adequate IA resources, IA independence, good relationship with the audit committee—will improve the internal control system, and the efficiency and reliability of the financial reporting process in the organisation.

5. Conclusion and Implications

This study ascertained the principal factors affecting IAE from the perceptions of auditors and auditees in insurance and takaful companies in Malaysia. In relation to agency theory, the IAF is perceived to be effective in assessing business operations. The IAF plays an important role in monitoring auditees (as agents) on behalf of the company (as principal). In this study, the respondents perceived the principal factors affecting IAE as IA resources, IA independence and relationship with the audit committee. Thus, H1, H2 and H4 are supported. In contrast with studies by Alzeban and Gwilliam, (2014) and Shamsuddin et al. (2015), this study found a

weak relationship between management support and IAE, thus, H3 is not supported. The insignificant relationship between management support and IAE could be explained by the existence of a strong positive relationship between the audit committee with IAF. In this regard, an effective audit committee may minimise the involvement of management on the activities of IAF because of the direct reporting line between the two. In addition, the BNM guidelines emphasise the important roles and functions of the audit committee to oversee the adequacy of resources of IAF and IAE overall (2010). The findings suggest that the audit committee can be regarded by the respondents as a more influential party that is able to provide greater support for the internal auditors to discharge their functions rather than management. One of the implications of the finding concerns the important roles of the audit committee in supporting the functions of the IA. Hence, an audit committee should comprise members with the right experience and knowledge and adequate numbers to ensure its quality. Other than that, with a greater degree of independence of the internal audit, the auditor may have access to all necessary documents and information that leads to better audit findings and higher quality audit reports to be sent to the responsible body, hence enhancing IAE.

The findings of the present study contribute to the existing literature by providing different perceptions of auditors and auditees on the factors that contribute to the effectiveness of IAF. This study concluded that there are differences in perceptions by the two groups of respondents on three principal factors that affect IAE: IA resources, IA independence and relationship with the audit committee. IA independence as the highest effect size. Likewise, both groups share a similar view that management support has an insignificant effect on IAE.

Moreover, the findings suggest the existence of gaps in perceived factors affecting IAF. This information can be used by management or chief audit executives to evaluate and narrow the gaps to strengthen the value of IAF and enhance the working relationship between internal auditors and auditees. Besides, the study findings could provide information as a benchmark to the chief audit executive to set for the internal audit department's key performance indicators. This study also contributes additional insights to future scholars who seek to explore IAE.

There are some limitations that should be noted in this study. First, this study only examines the perceptions of auditors and auditees on factors affecting IAE, hence, it is suggested future

research may want to include perceptions of other stakeholders, such as management, audit committees and external auditors. Second, this study only examined four principal factors that may affect IAE. Future research may explore other organisational and individual factors, such as organisational culture, organisational commitments and individual locus of control of internal auditors on IAE.

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