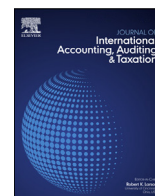


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Audit committee chair overlap, chair expertise, and internal auditing practices: Evidence from Malaysia



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ABSTRACT

In this study, we extend the scarce literature on audit committee (AC) leadership by examining the internal auditing outcomes of AC chair overlap as measured by multiple committees of the same board the AC chair serves on and the financial expertise of the AC chair. Theoretical tension exists (busyness or overcommitment versus knowledge spillover theory) about whether overlapping membership of the AC chair can enhance or weaken monitoring effectiveness. We leverage the 2014 annual report disclosures of the internal audit practices for a sample of Top 100 nonfinancial firms in Malaysia. Our results indicate that overlapping membership of the AC chair is associated with poor internal audit practices, especially the absence of disclosure on compliance with the International Professional Practices Framework and the absence of an internal audit charter. In addition, we find that AC chair financial expertise is more likely to be associated with the adoption of risk-based internal auditing practices.

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1. Introduction

Various corporate governance rules, such as the New York Stock Exchange listing rules, advocate that the audit committee (AC) is responsible for direct oversight of the internal audit function (IAF) (KPMG, 2017). The United Kingdom (UK) Internal Audit Code of Practice of 2020 stipulates that the AC is responsible for establishing the internal audit charter; reviewing and approving internal audit plans; appointing, appraising the performance of, and setting the objectives of the chief audit executive (CAE); deciding on the sourcing arrangement of the IAF; approving the resources and budget for the IAF; and ensuring that audit findings are properly reported and acted on by the organization (Chartered Institute of Internal Auditors, 2020). The AC's support of the IAF can facilitate the work of the CAE, and likewise, reciprocal support from the CAE can be a valuable resource and provide comfort to the AC (Scarborough, Rama, & Raghunandan, 1998; Goodwin & Yeo, 2001; Sarens, De Beelde, & Everaert, 2009; Soh & Martinov-Bennie, 2011; Rittenberg, 2016; Trotman & Duncan, 2018). As remarked by Rittenberg (2016, p. 2), "Internal audit's interaction with an audit committee (or equivalent board committee) is considered one of the hallmarks of good governance."

Of late, the role of the AC chair has come under a bright spotlight in business and academic discourse (Abernathy, Beyer, Masli, & Stefaniak, 2014; Tanyi & Smith, 2015; Jaafar, Wan-Hussin, & Bamahros, 2016; Compennolle & Richard, 2018; Ghafran

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& Yasmin, 2018; Canadian Public Accountability Board, 2019; Khemakhem & Fontaine, 2019; Free, Trotman, & Trotman, 2021). It is claimed that an attentive AC chair can shape the culture of, clarify the role of, and provide proper support to the IAF to ensure that it has the status, resources, skills, and expertise to succeed (Turley & Zaman, 2007; Chambers, 2016; KPMG, 2018). The 2016 proposed draft of the Malaysian Code on Corporate Governance (MCCG) states, "The efficacy of the audit committee often hinges on the role of the chair. The chair plays a pivotal role in providing leadership and vision as well as in setting and managing the audit committee's agenda" (Securities Commission, 2016, p. 16).

Although the chair is expected to play a crucial role in ensuring the IAF can function effectively, there are concerns that globally, AC agenda and responsibilities are growing beyond the core financial reporting and auditing oversight responsibilities (Bodine & Heid, 2016). For example, in light of emerging risks related to cybersecurity, ACs need sufficient knowledge to safeguard organizations from potential cyber vulnerabilities, and cybersecurity looms ever larger on AC agendas and features prominently in AC disclosures in proxy statements (Deloitte, 2019; Thiery & Fass, 2020). This has put tremendous pressure on the chair to properly govern the IAF and ensure that internal audit plans are flexible enough to cater to the evolving risks and regulatory landscape (Tugman & Leka, 2019). Consequently, the effectiveness of the IAF may suffer from the AC chair's lack of attentiveness due to the demanding workload and limited time and expertise (Copnell, 2018; Free et al., 2021). As echoed by Mary Jo White, the former SEC Chair, "Companies and directors should carefully choose who serves on their audit committee, selecting only those who have the time, commitment, and experience to do the job well" (White, 2015).

The time commitment of the AC chair may be stretched when the chair sits on other board monitoring committees within the same firm. Accordingly, the Higgs Report (2003) states, "I consider it undesirable for any one individual to be on all three principal board committees at the same time" (para 13.2). Further, Gal-Or, Hoitash, and Hoitash (2018) show that during the election of directors, directors only serving on the AC receive greater shareholder support than directors serving on the AC and other board monitoring committee(s), such as the compensation and/or nominating committee. When the workload of AC chairs who sit on multiple committees is stretched, their engagement with the IAF tends to be limited. Scholars argue that when the AC interacts less often with the IAF, the development of the IAF suffers (Scarborough et al., 1998; Goodwin & Yeo, 2001; Raghunandan, Read, & Rama, 2001; Gendron & Bédard, 2006; Mat Zain & Subramaniam, 2007).

On the other hand, we argue that AC chair memberships across subcommittees may benefit shareholders, as the chair is regarded as powerful and with clout and wide knowledge due to their exposure to various subcommittees. Turley and Zaman (2007) indicate that when the AC chair is perceived as possessing significant clout within the organization, the IAF is more forthcoming in reporting corporate misdeeds and inadequate internal audit resources to the AC. From the CAE's perspective, any fear of retaliation from senior management for whistleblowing to the AC is alleviated when the CAE has confidence in the AC's power (Turley & Zaman, 2007). Furthermore, Faleye, Hoitash, and Hoitash (2011) argue that independent directors serving on multiple monitoring committees can better understand the firm and its operating environment, thereby enhancing their ability to make better-informed decisions that lead to better organizational outcomes.

Sassen, Stoffel, Behrmann, Ceschinski, and Doan (2018) highlight that despite the rising incidence of directors serving on multiple committees, no study has examined the effectiveness of AC chairs with overlapping memberships in overseeing the IAF. Accordingly, the first objective of this study is to empirically address the theoretical tension of whether AC chair membership on multiple committees (i.e., AC chair overlap) is associated with stronger or weaker internal auditing practices.

Another prominent feature of AC effectiveness that has caught the attention of regulators in recent years is AC financial expertise (Bilal & Komal, 2018). A meta-analysis spanning 90 studies by Bilal and Komal (2018) conclude that AC financial expertise has a positive relationship with earnings quality, and the relationship is stronger for financial expertise which is directly connected to accounting (i.e., accounting financial expertise) than nonaccounting financial expertise. The Sarbanes-Oxley (SOX) Act of 2002 requires all listed firms to disclose to the SEC whether the AC chair of the company is a financial expert (DeFond, Hann, & Hu, 2005). Initially, the SOX Act proposed a narrow definition of financial expert; namely, an individual who has education and experience in accounting or auditing. However, following several letters objecting to this overly restrictive definition, the SEC's final rule spells out that an AC member can be designated as a financial expert if the individual has either direct accounting/auditing experience or nonaccounting experience (Abernathy et al., 2014; Lee & Park, 2019). In other words, a financial expert is an individual with experience in creating, auditing, using, or overseeing the creation of financial reports (Badolato, Donelson, & Ege, 2014).

Meanwhile, in Malaysia, the proposed MCCG (2016) recommended that the chair of the AC is a person with either accounting expertise (having a degree or professional qualification in accounting) or relevant work experience (Securities Commission, 2016, Practice 7.2). This proposal generated mixed reactions from various stakeholders. While BlackRock, the world's leading asset management firm, strongly supported the proposal, The International Corporate Governance Network (ICGN) took a neutral stand. The Policy Director of the ICGN, George Dallas, argued that "As long as the chair is sufficiently financially literate and has an adequate understanding of a company's financial statements, internal control and related risk, it may be limiting to suggest that only qualified accountants hold this role. The definition of 'accounting expertise' would benefit from being much broader than just being professionally qualified, and needs to include knowledge of the recent requirements/developments and practices of accounting and auditing standards and their application" (Dallas, 2016, p. 10). Responding to this regulatory debate¹, the second objective of this study is to examine the still unexplored nexus between the accounting financial expertise of the AC chair and internal auditing practices.

¹ The draft MCCG 2016 was replaced by the final MCCG 2017, and the recommendation for the AC chair to have accounting expertise was withdrawn.

By investigating the association between workload and accounting financial expertise of the AC chair and internal auditing practices, our study responds to the call by [Behrend and Eulerich \(2019\)](#), who suggest that a study on the interplay of internal auditors and the AC is “a potentially fruitful area of future archival and qualitative internal auditing research” (p. 119). We develop hypotheses suggesting that the audit chair workload and accounting financial expertise are associated with three essential internal audit practices.

The choice of these practices as indicators of internal audit effectiveness is guided by prior literature as well as guidelines issued by the Institute of Internal Auditors (IIA) and capital market regulators, such as Bursa Malaysia. Various scholars ([Lenz & Hahn, 2015](#); [Dal Mas & Barac, 2018](#); [Lenz, Sarens, & Jeppesen, 2018](#)) assert that the IAF can be considered effective if it (i) complies with the IIA’s International Professional Practices Framework (IPPF) which includes the International Standards on Professional Practice in Internal Auditing (ISPPA), (ii) adopts risk-based internal auditing as demanded by the IIA Performance Standard 2010, and (iii) is governed by a strong internal audit charter. In 2019, the IIA published two position papers to reiterate the importance of embracing such practices in internal auditing activities.²

Moreover, the capital market regulator, Bursa Malaysia, highlights similar IAF Dos and Don’ts in its Corporate Governance Guide ([Bursa Malaysia, 2017](#)). The “good practices” for IAF include, “establishing an internal audit charter to set forth the purpose of the IAF, its responsibilities and the necessary authority that it has been conferred with to carry out its work” and “the adoption of a professionally recognized framework, such as the IPPF by the IIA would go a long way in fostering the need for proper adherence to independence and ethical standards as well as technical standards on the execution of internal audits and quality assurance” (pp. 66–67). Meanwhile, the Guide warns that the IAF could go wrong if “the internal audit work performed is not sufficiently responsive to changes in business strategies and risk profile of the company” (p. 65). In other words, the Guide recommends that companies should adopt a risk-based audit approach in planning and conducting the internal audit work.

Malaysia provides a rich and natural research setting to pursue our research objectives for the following reasons. First, all listed companies in Malaysia must establish an AC and IAF, effective from 1994 and 2008, respectively, and the IAF must report directly to the AC ([Abdullah, Ismail, & Smith, 2018](#); [The IIA Malaysia, 2017](#)). Paragraph 15.11 of the Listing Requirements ([Bursa Malaysia, 2021](#)) further stipulates that the AC must review and report the following to the board of directors: (i) the adequacy of the scope, competence, and resources of the IAF and that it has the necessary authority to carry out its work; and (ii) the internal audit plan, the processes, the results of the internal audit assessments, investigations undertaken, and whether appropriate action has been taken on the recommendations. Second, there is the relative maturity of the IAF disclosures in the annual reports of Malaysian companies ([Wan-Hussin & Bamahros, 2013](#); [Abdul Wahab, Gist, Gul, & Mat Zain, 2021](#)). Third, a joint study by Bursa Malaysia and IIA Malaysia highlights various shortcomings in the IAF among Malaysian listed firms, such as lack of adoption of a recognized internal auditing framework and risk-based audit plan, and not performing root-cause analysis before coming up with recommendations to address the weaknesses noted ([Bursa Malaysia, 2020](#)). Finally, there is a wide incidence of directors in Malaysia holding appointments in multiple committees, which allows us to better examine the association between AC chair overlap and internal auditing outcomes. [Al-Dhamari, Alquhaif, and Al-Gamrh \(2020\)](#) indicate that 92% of the Top 300 Malaysian firms had directors serving more than one board committee between 2013 and 2015. A study by KPMG Malaysia Audit Committee Institute reveals that slightly more than half (55%) of nonexecutive directors serve two or more board committees ([KPMG, 2013](#)).

By leveraging the disclosure of internal audit activities in the annual reports and following [Axen \(2018\)](#) and [Boskou, Kirkos, and Spathis \(2019\)](#), our study departs from the methodology of most prior studies, which gather internal audit data based on surveys of the CAEs, ACs, or external auditors ([Turetken, Jethhefer, & Ozkan, 2020](#)). Our study overcomes the self-reporting bias inherent in survey data that raise concerns about the reliability of the internal audit data in prior studies. [Behrend and Eulerich \(2019\)](#) report that survey-based studies are rarely cited in the leading accounting journals.

Based on a sample of Top 100 nonfinancial firms in 2014, our results indicate that overlapping memberships of the AC chair are associated with poor internal audit practices, especially the lack of disclosure on compliance with the IPPF and the absence of an internal audit charter. We also find that AC chair accounting financial expertise is more likely to be associated with the adoption of risk-based internal audit practices. Our results are robust to a host of additional tests aimed to capture alternative proxies of AC chair workload and financial expertise.

The study contributes to the internal auditing and corporate governance literature in the following ways. We exploit the disclosures of IAF practices in annual reports and add to the limited internal audit literature that uses archival data. [Roussy and Perron \(2018\)](#) claim that despite the current dearth of data (p. 347), archival study is an interesting way to study internal audit. We enrich the literature on AC chair and AC overlapping memberships by documenting that the chair’s busyness/over-commitment and accounting financial expertise are likely to shape the internal auditing practices, at least among the large listed firms in Malaysia. Thus, our results support the view that the AC chair is a key contributor to AC effectiveness who engages frequently with key corporate governance stakeholders ([Free et al., 2021](#)). Our indicators of IAF quality extend the indicators typically employed in prior research, namely internal audit staff competence (experience, education, certification, and training) and objectivity (reporting line of the CAE) as captured by proprietary survey data administered by the IIA Global Auditing Information Network.

² “Relationship of Trust” recommends that the AC requires internal audit activities to comply with the IIA standards. “The Internal Audit Charter” suggests that organizations have a well-designed internal audit charter to clearly signal the value it places on internal audit’s independence.

The paper proceeds as follows. The next section reviews the related literature and develops two hypotheses to address the research objectives. This is followed by the research methods in Section 3. The results are presented in Section 4. Section 5 ends with concluding remarks.

2. Literature review

2.1. Internal auditing practices

Although several studies show that a high-quality IAF brings various benefits, such as improving internal controls, deterring management misconduct, enhancing financial reporting timeliness and quality, and constraining earnings management, few studies examine the determinants of internal audit practices. The economic value of the IAF goes beyond financial reporting (Abbott, Daugherty, Parker, & Peters, 2016; Jiang, Messier, & Wood, 2020). Ample studies show that an effective IAF helps improve internal controls over financial reporting (Lin, Pizzini, Vargus, & Bardhan, 2011; Mazza & Azzali, 2015), mitigate accruals-based and real earnings management (Prawitt et al., 2009; Ghaleb, Kamardin, & Al-Qadasi, 2020), prevent fraud (Ege, 2015), promote financial reporting timeliness (Wan-Hussin & Bamahros, 2013; Pizzini, Lin, & Ziegenfuss, 2015; Gros, Koch, & Wallek, 2017), reduce risk (Carcello, Eulerich, Masdi, & Wood, 2020) and reduce external audit fees (Felix, Gramling, & Maletta, 2001). A strong IAF is also linked to superior operating performance (Chen, Lin, Lu, & Zhou, 2020; Jiang et al., 2020) and stimulating organizational learning and positive change (Roussy, Barbe, & Raimbault, 2020). Moreover, the new Internal Audit Code of Practice recognizes that the IAF is vital to protect organizations' assets, reputation, and sustainability (Chartered Institute of Internal Auditors, 2020).

Among the first wave of research on the antecedents of IAF practices are studies that examine factors associated with the size of and investment in IAF. These include Carcello, Hermanson, and Raghunandan (2005), Barua, Rama, and Sharma (2010), and Anderson, Christ, Johnstone, and Rittenberg (2012) in the United States (US); Sarens and Abdolmohammadi (2011a) in Belgium; Alhajri (2017) in Kuwait; and Al-Dhamari, Almagdoub, and Al-Gamrh (2018) in Malaysia. There are also studies that examine compliance with the ISPPIA (Abdolmohammadi, 2009; Burnaby, Abdolmohammadi, Hass, Sarens, & Allegrini, 2009; Abdolmohammadi & Sarens, 2011) and adoption of risk-based internal audit plans (Coetzee & Lubbe, 2014; Zainal Abidin, 2017).

Based on insights from Lenz and Hahn (2015), Dal Mas and Barac (2018), and Lenz et al. (2018), this study uses three internal auditing practices as indicators of IAF quality, namely compliance with the ISPPIA, adoption of risk-based internal auditing, and existence of an internal audit charter. Alzeban (2019) shows that Saudi firms that exhibit higher compliance with the ISPPIA have better financial reporting quality. Sarens, Abdolmohammadi, and Lenz (2012) and Martino, D'Onza, and Melville (2019) show that the use of the risk-based audit plan is associated with the IAF having an active role in corporate governance, based on data from the US, Australia, Canada, New Zealand, South Africa, and the UK/Ireland. Meanwhile, O'Regan (2002) and Van Peursesem (2005) emphasize that a well-drafted and strong internal audit charter is a crucial ingredient for an effective IAF, as it gives a respectable layer of authority to the internal auditors. The three indicators of IAF effectiveness are discussed in more detail in the following subsections.

2.1.1. Internal auditing standards

The global IIA standards for internal auditors are those of the ISPPIA, a mandatory component of the IPPF (Bailey, 2016). Based on the IIA's Code of Ethics, internal auditors should perform internal auditing services aligned with the ISPPIA. The standards are necessary because the internal audit activities are conducted in a cultural and legal environment that varies in size, diversity, purpose, complexity, and structure. In other words, this diversity of culture and law affects internal audit practice in each environment where the activities are performed, either internally or externally. The IPPF-ISPPIA outlines what internal auditors must do to be effective and efficient, and the internal auditor is expected to apply and follow them. Internal auditors who follow the IPPF-ISPPIA bring technical rigor to their assurance activities and improve the quality of their work through formal internal and external assessments (Chartered Institute of Internal Auditors, 2019).

Even though conformance to the ISPPIA is mandatory for all members of the IIA and all Certified Internal Auditors, the 2015 Global Internal Audit Practitioner Survey finds significant levels of noncompliance. Most surveyed CAEs report that they do not use all the ISPPIA, and only a few acknowledge that they are in conformance with the ISPPIA. The reasons given for nonconformance include lack of board/management support and perceived benefits not commensurate with the cost. The incidence of conformance is higher in regulated industries and among CAEs holding internal audit-related professional qualifications and who are members of the IIA (Bailey, 2016). In addition, internal auditors are more likely to use the ISPPIA if the organization has an AC (Bailey, 2016).

Fadzil, Haron, and Jantan (2005) assert that compliance with the ISPPIA indicates internal audit effectiveness. Using survey data obtained from Malaysian listed companies, they show that the internal auditing practices generally comply with the internal auditing standards, and the compliance level influences the quality of the internal control system. Sarens and Abdolmohammadi (2011b), using a sample from developed and emerging countries, show that the use of internal auditing standards is associated with the adoption of internal audit best practice tools and techniques, such as data mining, computer assisted audit tools, flowchart software, and electronic work papers. Furthermore, Alzeban (2019) shows that financial reporting quality is higher for Saudi firms that adhere to the ISPPIA.

2.1.2. Risk-based internal audit approach

Organizations are increasingly acknowledging and emphasizing risk management because risks can threaten the sustainability of a business. The IAF plays a vital role in helping firms manage risks by providing consultancy services to improve and evaluate the risk management process. [Spira and Page \(2003\)](#) assert that modern internal auditing is risk-based. The IIA Performance Standard 2010 requires risk-based internal auditing, which is essential for the firms to survive and succeed in a complex, turbulent, and uncertain business world. Using risk-based auditing underscores the importance of evaluating the risks inherent in operational and strategic objectives ([Selim & McNamee, 1999](#)). The IAF should assess risks on an integrated rather than a piece-meal basis ([Matyjewicz & D'Arcangelo, 2004](#)). A lack of integrated surveillance and inefficient monitoring of risks at the operational and strategic levels could lead to risk exposure. Applying a risk-based audit approach can ensure that the internal audit activities are focused on areas of concern to the organizations.

A stream of literature highlights the benefits that accrue to firms that use a risk-based internal audit plan. [Sarens et al. \(2012\)](#) and [Martino et al. \(2019\)](#) document that the involvement of the IAF as a corporate governance gatekeeper through activities related to review of governance policies and procedures, ethics-related audits, and reviews that address the relationship between strategy and performance is enhanced when the IAF adopts risk-based audit planning. [Coetzee and Lubbe \(2014\)](#) associate the maturity of risk-based internal auditing with internal audit effectiveness.

Another stream of literature on risk-based internal auditing focuses on specific firm characteristics associated with adopting risk-based approaches in the internal audit process ([Castanheira, Rodrigues, & Craig, 2010](#); [Zainal Abidin, 2017](#)). Using survey data, [Zainal Abidin \(2017\)](#) finds that certain AC attributes and risk management practices influence the implementation of risk-based internal auditing among Malaysian firms. [Castanheira et al. \(2010\)](#) show that based on a questionnaire survey, the adoption of risk-based internal auditing is more prevalent among international firms and listed firms in Portugal.

2.1.3. Internal audit charter

The Attribute Standard 1000 in the ISPPA states that the IAF's purpose, authority, and responsibility should be formally defined in a charter. According to [Moeller \(2010\)](#), the internal audit charter is a recognized official record documented by the AC to explain the objectives, responsibilities, mission, scope, accountability, independence, authority, and functions of the internal audit for business organisations. The internal audit charter (i) establishes the internal audit position within the organization, including the nature of the CAE's functional reporting relationship with the board, (ii) authorizes access to records, personnel, and physical properties relevant to the performance of engagements, and (iii) defines the scope of internal audit activities. Final approval of the internal audit charter resides with the board of directors.

The internal audit charter articulates how the internal audit adds value to the business, the kind of services provided, and the goals and targets of the organization. It also emphasizes the requirement for internal audits to help the organization achieve its goals. The internal audit charter is assessed and reviewed frequently to help the AC and internal audit stay tuned to the emerging risks impacting the business ([O'Regan, 2002](#); [Chartered Institute of Internal Auditors, 2019](#)).

Empirical studies on internal audit charter are scarce and mostly descriptive. [Cenker and Nagy \(2004\)](#) compare the charters of eight companies based on insights provided by the internal auditors. Their study suggests that internal audit charters can communicate the role of the IAF to the appropriate parties and help minimize misunderstanding of its roles and functions. As emphasized by a senior internal auditor in New Zealand, "I think the key to success [in] really running an internal audit team is to have your internal audit objectives and your internal audit charter, or lines, both [in line] with the direction of the Board ... but also the reporting mechanism has got to be aligned with the CEO in terms of the organisation, but also there has to be reporting to an independent audit committee" ([Van Peurse, 2005, p. 507](#)).

In Belgium, based on multiple case studies to assess the interaction between internal auditors and the AC and to explore their expectations and perception, [Sarens and De Beelde \(2006\)](#) suggest that both parties will benefit from clear communication about the specific roles and mission of the internal audit through the dissemination of the internal audit charter. In 2019, the IIA published a position paper that identifies seven vital components of an internal audit charter: mission and purpose; adherence to the ISPPA; authority; independence and objectivity; scope of internal audit activities; responsibility; and quality assurance and improvement programs.

2.2. Association between audit committee chair overlap and IAF best practices

The board of directors has various responsibilities and tasks. Normally, the board delegates its tasks to different committees ([Spira & Bender, 2004](#)). In Malaysia, the MCG (2012) recommends listed firms to have mainly independent nonexecutive directors on the audit, remuneration, and nomination committees. This requirement created a shortage of capable independent directors in the market, and most independent board members sit on two or three committees within the same firm ([Chandar, Chang, & Zheng, 2012](#); [KPMG, 2013](#); [Kusnadi, Leong, Suwardy, & Wang, 2016](#)). This resulted in increasing overlap, whereby independent directors serve on more than one committee ([Chang, Luo, & Sun, 2011](#)). The time commitment and workload of AC chairs may be stretched when they sit on other board committees within the same firm.

A few studies reiterate that the IAF is an important resource for the AC in discharging its responsibilities, and view the interactions between CAE and AC chair, both formal and informal, as crucial in reducing the information asymmetry between the AC chair and executive management ([Beasley, Carcello, Hermanson, & Neal, 2009](#); [Compernelle & Richard, 2018](#); [Gendron & Bédard, 2006](#); [Khemakhem & Fontaine, 2019](#); [Roussy, Barbe, & Raimbault, 2020](#); [Sarens, Christopher, & Zaman, 2013](#); [Turley & Zaman, 2004, 2007, Zaman & Sarens, 2013](#)). Studies by [Scarborough et al. \(1998\)](#) in Canada,

Goodwin and Yeo (2001) in Singapore, and Raghunandan et al. (2001) in the US, show that more frequent interactions between internal audit and the AC result in a more thorough review of internal audit plans and recommendations by the AC. Based on a survey of the CAEs in Australia, Sarens et al. (2013) observe that independent AC chairs take the initiative to informally interact with the CAEs to reduce the information asymmetry. Furthermore, they observe that the most common issues discussed during the informal interactions are risk management and internal controls, corporate governance, and internal audit plans and budget.

However, Mat Zain and Subramaniam (2007) indicate that the informal interactions between the AC and the IAF are infrequent in Malaysia, and their private meetings are limited. They suggest this could be due to AC members being busy serving on numerous committees and boards with limited time to develop informal communication channels. The less intensive monitoring effort arising from infrequent informal interactions due to overcommitment may marginalize the IAF.

On the other hand, an overlapping AC chair may create knowledge spillover as the chair can apply knowledge learned from one committee to the oversight role in another committee. As overlapping AC chairs are regarded as more knowledgeable, it can lead to more informal interactions. A case study of a UK financial institution (Ashburton case) by Turley and Zaman (2007) indicates that CAEs are more likely to pursue informal interactions with knowledgeable and experienced AC chairs. Moreover, the AC chair who sits on multiple committees may be perceived as a powerful corporate governance actor. Turley and Zaman (2007) suggests that when the AC chair is perceived as possessing significant clout within the organization, internal audit is more forthcoming in reporting to the AC any misappropriation by the chief executive, any misstatement of income by the finance function, and the level of resources given to internal audit. The willingness of the internal auditors to report their concerns to the AC should lead to improved governance. Internal auditor's assessment of the seriousness of the issues and the confidence in the AC's power seems to alleviate any fear of retaliation from senior management for whistleblowing to the AC (Turley & Zaman, 2007).

In tandem with the above discussion, there are two competing views in the extant literature on the likely effects of overlapping ACs on corporate outcomes. On the one hand, multiple memberships on board committees signal that AC directors are highly sought after due to their reputation. To sustain their reputations, overlapping AC directors are motivated to devote greater effort to monitoring the financial reporting process. Memberships in various board monitoring committees can also benefit shareholders, as overlapping directors can apply knowledge learned from the AC to their oversight roles, for example, in the compensation committee and vice versa (Liao & Hsu, 2013). However, the alternative view argues that the time commitments and workloads of AC directors may be stretched when they sit on multiple subcommittees within the same firm. The diluted monitoring effort of the AC due to overcommitment may adversely affect the accounting and auditing outcomes.

Tanyi and Smith (2015) find that firms with overlapping AC chairs have significantly lower financial reporting quality as reflected by higher levels of abnormal accruals and a greater likelihood to meet or beat earnings benchmarks, in line with the busyness hypothesis. Liao and Hsu (2013), Karim, Robin, and Suh (2016), and Fernández Méndez, Arrondo García, and Pathan (2017) find that memberships in both audit and remuneration committees reduce AC effectiveness because of limited time and the greater tendency of members to shirk additional responsibilities. Fernández Méndez et al. (2017) show that firms with overlapping AC directors exhibit a higher probability of receiving a qualified audit opinion in Spain, reflecting overcommitment and reduced monitoring of financial reporting.

However, Fernández Méndez, Pathan, and Arrondo García (2015) show that overlapping AC directors are associated with a lower probability of receiving a qualified audit opinion and lower audit fees in Australia. These indicate that the external auditors perceive lower audit risk with improved monitoring from overlapping directors. Kalelkar (2017) also shows a negative relationship between overlapping membership in board monitoring committees and audit fees, consistent with the notion that the lower audit fees reflect the lower audit risk associated with having AC members sitting on other committees. Meanwhile, Habib and Bhuiyan (2016) and Sultana, Cahan, and Zhang (2017) show that Australian firms, with directors serving on both the AC and compensation committee simultaneously in a firm, have lower earnings management, suggesting the synergistic effect of information transfer or knowledge spillover among subcommittees of the board. Likewise, a UK study by Ghafran and Yasmin (2018) shows that the AC chair who serves on multiple committees gains a more complete understanding of the firm and this broader view helps to improve the timeliness of financial reporting.

Given the above competing theoretical predictions on the association between AC chair overlap and internal auditing practices, it remains unclear which theory (busyness hypothesis versus knowledge spillover hypothesis) is consistent with the empirical evidence. Based on the above discussion, the following nondirectional hypothesis is posited:

H1. There is a relationship between audit committee chair overlap and the adoption of internal auditing best practices.

2.3. Association between audit committee chair financial expertise and IAF best practices

As most AC duties involve financial reporting, it is imperative for AC chairs to possess experience and knowledge in accounting, auditing, and finance, which will allow them to effectively perform oversight duties. It is vital for the AC chair to have the capability to lead a discussion or deliberation, and to have the confidence to digest all the information, process it, and make recommendations to the board. Accordingly, as mentioned earlier, the SOX Act requires all listed firms to disclose to the SEC whether the company's AC chair is a financial expert (DeFond et al., 2005). An AC member qualifies as a financial expert if the individual has either direct accounting experience or nonaccounting financial experience, such as

supervising financial statement preparation (Lee & Park, 2019). In the UK, a financial expert is someone with current and relevant financial experience (Ghafran & O'Sullivan, 2017).

As noted earlier, several studies show that the oversight of the IAF by the AC is often performed via informal interactions (Raghunandan et al., 2001; Gendron & Bédard, 2006; Mat Zain & Subramaniam, 2007; Turley & Zaman, 2007; Sarens et al., 2013). Raghunandan et al. (2001) solicit the views of CAEs in the US and discover that ACs with solely independent directors and at least one member having an accounting or finance background are more likely to have longer meetings with the CAEs, provide private access to the CAEs, and review internal audit plans and audit findings. Based on interviews with CAEs in Malaysia, Mat Zain and Subramaniam (2007) conclude that the CAEs perceive that IAF can be strengthened when AC members possess appropriate financial knowledge, preferably an accounting/auditing qualification.

Schmidt and Wilkins (2013) and Abernathy et al. (2014) examine the relationship between the accounting expertise of the AC chair and financial reporting timeliness. They conclude that having an AC chair with public accounting experience promotes financial reporting timeliness. Gal-Or et al. (2018) suggests that AC chairs without financial expertise receive lower shareholder approval in directors' elections. In Malaysia, Baatwah, Salleh, and Stewart (2019) show that an AC chair with accounting expertise is associated with a reduction in audit delay. Al-Absy, Ku Ismail, and Chandren (2019) do not find any association between the accounting financial expertise of the AC chair and earnings management. Ghafran and Yasmin (2018) find that the AC chair's accounting and nonaccounting financial expertise are not associated with audit delay in the UK.

There is also a wealth of research on the financial expertise of the AC that not only focuses on the AC chair, but also considers the AC as a whole. These studies generally find that the capability of the AC is reinforced when members have accounting financial expertise. Krishnan and Visvanathan (2008) show that AC accounting financial expertise is associated with greater accounting conservatism, whereas the effect is muted for nonaccounting financial expertise. Likewise, Dhaliwal, Naiker, and Navissi (2010) and Cohen, Hoitash, Krishnamoorthy, and Wright (2014) document that the positive effect of having a financial expert on the AC on financial reporting quality is more pronounced when the expert has accounting financial expertise. Similarly, DeFond et al. (2005) show that the stock market reacts positively to the appointment of AC members with accounting financial expertise. In addition, Sultana, Singh, and Van der Zahn (2015), Abad and Bravo (2018), and Lee and Park (2019) observe that AC accounting expertise reduces audit delay, enhances disclosure of forward-looking information, and curtails manipulation of the tone of qualitative information in the management discussion and analysis, respectively.

However, Ghafran and O'Sullivan (2017) find that AC nonaccounting expertise rather than accounting expertise drives higher audit fees, a proxy of audit intensity and audit effort in the UK. Meanwhile, Goh (2010) illustrates that only nonaccounting financial expertise and not accounting expertise is positively related to the timeliness of remediating internal control material weaknesses. In addition, Badolato et al. (2014) finds that US AC financial expertise does not constrain accounting irregularities unless the AC also has high status.

The plethora of research discussed above shows that AC oversight of financial reporting is enhanced when the chair has accounting financial expertise. Accordingly, we predict that an AC chair with accounting financial expertise can influence and improve the quality of IAF in several ways. First, AC chairs with such expertise are competent in evaluating the firm's internal audit plan and its suitability. They can also handle risk assessment issues by identifying and minimizing risk exposure (DeZoort & Salterio, 2001). DeZoort and Salterio (2001) report that an AC with auditing and financial reporting knowledge can understand the auditor's judgment and address auditor-management disputes. Based on the expectation that an AC chair with accounting expertise helps to inculcate better internal auditing practices, we posit that the accounting financial expertise of the AC chair is significantly related to IAF effectiveness.

H2. There is a positive relationship between the accounting financial expertise of the audit committee chair and the adoption of internal auditing best practices.

3. Method

3.1. Sample and data

The research focuses on the IAF practices of large listed companies in Malaysia. The sample is selected from the Top 100 nonfinancial companies ranked by market capitalization as of December 31, 2014. These companies represent nearly two-thirds of the total market value of companies listed on Bursa Malaysia. Large companies are also more transparent than their small-cap counterparts. A survey done by the Minority Shareholders Watch Group based on annual reports from July 31, 2017, to June 30, 2018 indicates that the percentages of Top 100 (all listed) companies that disclose annual general meeting minutes, individual director remuneration, and whistle-blowing policy are 87% (44%), 92% (53%), and 94% (no data available), respectively.

The data sources on IAF practices are extracted from the following sections in the 2014 annual report: statement on corporate governance, statement on risk management and internal controls, and AC report. The particulars of the AC and board members are taken from the directors' profiles in the 2014 annual report. The financial data are obtained from Datastream.

The first and second authors independently code the presence (1) or absence (0) of IAF best practices in the sample firms by reading the entire statement on corporate governance, statement on risk management and internal controls, and AC

report. In the rare cases of disagreements, the three authors collectively discussed and resolved the discrepancies before the final score was agreed upon (Kotb, Elbardan, & Halabi, 2020). Below is an example of the disclosures made by a sample firm (Digi.Com Berhad, 2014, p. 63) with exemplary internal audit processes and structures, with the underlined sentences indicating the presence of IAF “best practices”:

“The internal audit function carried out by the Assurance Department, assists both the Board and the Audit & Risk Committee by conducting appropriate reviews of key business processes to assess the adequacy and the effectiveness of internal control and risk management, compliance with regulations, and the Group’s policies and procedures. To ensure independence from Management, the Head of Assurance reports directly to the Audit & Risk Committee. The Assurance Department’s practices and conduct are governed by the Assurance Charter, which is subject to review and approval on an annual basis by the Audit & Risk Committee. The Audit Plan is developed based on a risk-based approach and is approved by the Audit & Risk committee annually. The status of the Audit Plan is presented to the Audit & Risk Committee on a quarterly basis. The audit reports, including significant findings and recommendations for improvements, and management’s responses to the recommendations are highlighted to DMT and, on a quarterly basis reported to the Audit & Risk Committee. Adequate measures and actions by management to address improvement areas highlighted are followed-up and reviewed on a quarterly basis. The Assurance Department also maintains a quality assurance and improvement program and continuously monitors its overall effectiveness. The Assurance Department underwent a Quality Assurance Review by the Institute of Internal Auditors Malaysia and was judged to have fully met the requirements set by the International Institute of Internal Auditors.”

3.2. Model specification

To test hypotheses H1 and H2, a cross-sectional regression model is used based on prior studies on the determinants of internal audit size/investment/existence (Carcello et al., 2005; Barua et al., 2010; Sarens & Abdolmohammadi, 2011a; Anderson et al., 2012; Al-Dhamari et al., 2018; Ismael & Roberts, 2018; Ronkko, Paananen, & Vakkuri, 2018), as shown below:

$$\text{PRACTICE} = a + \beta_1\text{ACOV LAP} + \beta_2\text{ACFEXP} + \beta_3\text{ACSIZE} + \beta_4\text{ACTENURE} + \beta_5\text{BSIZE} + \beta_6\text{BIND} + \beta_7\text{IASOURCE} + \beta_8\text{LNIACOST} + \beta_9\text{LNSIZE} + \beta_{10}\text{LEVERAGE}$$

The Appendix provides the variable definitions. We expect the coefficient of AC chair overlapping membership (ACOV-LAP) to be positive (negative) under the knowledge spillover (busyness) theory and the coefficient of AC chair expertise (ACFEXP) to be positive. Based on prior studies, we expect AC chair tenure (ACTENURE) to be negatively associated with IAF “best practice” disclosures (Tanyi & Smith, 2015; Al-Dhamari et al., 2018). Meanwhile, AC size (ACSIZE), board independence (BIND), in-house internal audit (IASOURCE), investment in internal audit (LNIACOST), firm size (LNSIZE), and leverage (LEVERAGE) are expected to be positively associated with IAF quality or effectiveness (Carcello et al., 2005; Sarens & Abdolmohammadi, 2011a; Anderson et al., 2012; Al-Dhamari et al., 2018; Ismael & Roberts, 2018; Ronkko et al., 2018). The direction of the association between board size and IAF practices is indeterminate.

4. Results

4.1. Sample composition and descriptive statistics

Table 1 shows the sample composition. Nearly half of the sample firms are from the trading and services sector, followed by consumer products (13%) and industrial products (12%). Plantation and property companies each represent 11% of the sample.

Table 2 presents the descriptive statistics of the IAF practices that are proxies of IAF quality, namely compliance with the IPPF/ISPPIA, the existence of an internal audit charter, and adoption of risk-based internal audit methodology. Only 34% of sample companies disclose that they apply the internal auditing standards. The percentage of companies with an internal audit charter is 44%, and nearly three-quarters of the companies adopt a risk-based internal audit plan. In addition, we scrutinize the text narratives in the annual reports to ascertain whether the IAF is reviewed by third parties under the quality assurance program and observe that only seven firms disclose this information. Due to lack of variation, quality assurance is not included as an IAF quality indicator in this study, although IIA Malaysia recommends that external assessments of the IAF must be conducted at least once in every five years by a qualified independent assessor or assessment team from outside the organization (IIA Malaysia, 2017).

Most AC chairs in our sample also sit in other board committees. The average score for AC chair overlap is 1.39. In 59% of the companies, the AC chairs also sit on both remuneration and nomination committees; in 19% of the companies, the AC chairs also sit on the nomination committee; in 2% of the cases, the AC chairs also sit on the remuneration committee; and in 20% of the companies, the AC chairs do not sit on other board committees. On average, 66% of the AC chairs have an accounting degree or accounting professional qualification.³ In terms of AC size, the mean (median) is 3.48 (3) members,

³ Twelve have both accounting degree and professional qualification. Only two accounting degree holders do not have professional qualification. Four AC chairs do not have an accounting qualification but are deemed to be financial experts by virtue of relevant work experience.

Table 1
Distribution of sample companies by sector.

Number	Bursa Sector	No. of Firms	%
1	Construction	3	3
2	Consumer Products	13	13
3	Hotel	1	1
4	Infrastructure Projects	4	4
5	Industrial Products	12	12
6	Plantation	11	11
7	Properties	11	11
8	Trading and Services	45	45
Total		100	100%

Table 2
Descriptive statistics.

	Mean	Median	Minimum	Maximum	SD
PRACTICE-IPPF/ISPPA	0.34	0	0	1	0.48
PRACTICE-RISK	0.74	1	0	1	0.44
PRACTICE-CHARTER	0.44	0	0	1	0.50
PRACTICE-COMPOSITE	0.51	0.33	0	1	0.31
ACOV LAP	1.39	2	0	2	0.80
ACFEXP	0.66	1	0	1	0.48
ACSIZE	3.48	3	3	6	0.72
ACTENURE	7.90	6.00	1	35	6.83
BSIZE	8.70	8.50	5	14	1.92
BIND	0.47	0.44	0.30	0.78	0.11
IASOURCE	0.86	1	0	1	0.35
IAF Cost (RM000)	2607	989	15	44,100	5312
LNIACOST	13.80	13.80	9.62	17.60	1.46
Market Value (RM million)	10,565	4132	1529	69,867	14,410
LNSIZE	15.56	15.23	14.24	18.06	1.03
LEVERAGE (%)	24.16	25.03	0.00	63.02	16.92

Note: See Appendix for variable definitions.

with a minimum of three and a maximum of six directors. The tenure of the AC chair ranges from 1 to 35 years and averages 8 years.

In terms of board size, the minimum number of board members is 5 and the maximum number of board members is 14, with a mean and median of approximately 9 members. In this study, the mean (median) of board independence is 0.47 (0.44), the minimum number of board independence is 0.30, and the maximum is 0.78. With respect to the internal audit sourcing arrangement, 86% of the Top 100 nonfinancial firms have in-house internal audit. This indicates that large companies have good financial resources and the capacity to establish their own internal audit departments. The mean of investment in IAF is about RM2.6 million, with a median of nearly RM1 million. The average amount spent for IAF for our sample firms is lower than the figure reported by Al-Dhamari et al. (2018). They examined the top 100 firms by market capitalization (including financial and nonfinancial firms) and observed that the firms spent an average of RM4 million on IAF over the period 2012–2014.

4.2. Bivariate and multivariate analysis

The results of the Pearson correlation matrix are shown in Table 3. The highest correlation among the independent variables is between investment in IAF (LNIACOST) and market capitalization (LNSIZE) at 0.69. Therefore, there is no evidence of a multicollinearity problem. The AC chair overlap variable (ACOV LAP) has significant negative correlations at the 1% level with the dependent variables, namely, PRACTICE-IPPF/ISPPA (−0.32), PRACTICE-CHARTER (−0.26), and PRACTICE-COMPOSITE (−0.38), suggesting that an AC chair who also sits on other board committees performs the monitoring role less effectively due to overcommitment that adversely affects IAF effectiveness. These results imply that companies with AC chairs who sit on multiple committees are less likely to disclose that their IAF complies with IPPF and has an internal audit charter. Having an AC chair with accounting financial expertise is positively correlated with risk-based internal auditing. The investment in IAF is also significantly and positively correlated with all dependent variables; the correlations with PRACTICE-IPPF/ISPPA, PRACTICE-RISK, PRACTICE-CHARTER, and PRACTICE-COMPOSITE are 0.24, 0.25, 0.28, and 0.39, respectively, and all are significant at the 1% level. This implies, as expected, that companies making larger investments in IAF are associated with more effective IAF. Companies with an in-house IAF are also generally associated with a more effective IAF in terms of having an internal audit charter and adopting a risk-based audit plan.

Table 3
Pearson correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.PRACTICE-IPPF/ISPPA													
2.PRACTICE-RISK	0.129												
3.PRACTICE-CHARTER	0.089	0.250***											
4.PRACTICE-COMPOSITE	0.618***	0.648***	0.715***										
5.ACOVLAP	-0.324***	-0.167*	-0.256***	-0.380***									
6.ACFEXP	0.025	0.248**	0.168	0.219**	-0.125								
7.ACSIZE	0.109	0.111	0.138	0.181*	-0.013	0.128							
8.ACTENURE	0.005	-0.131	-0.133	-0.130	0.041	-0.367***	-0.071						
9.BSIZE	-0.042	0.062	0.013	0.015	-0.094	0.119	0.267***	-0.180					
10.BIND	0.234**	0.041	0.133	0.210**	-0.234**	0.074	0.112	0.011	-0.262***				
11.IASOURCE	0.046	0.221**	0.241**	0.256**	-0.092	0.015	0.110	-0.087	0.057	0.028			
12.LNIACOST	0.238**	0.247***	0.277***	0.385***	-0.239**	0.042	0.285***	-0.118	0.292***	0.115	0.534***		
13.LNSIZE	0.318***	0.200**	0.180*	0.352***	-0.181*	0.000	0.142	-0.099	0.242**	0.067	0.274***	0.686***	
14.LEVERAGE	0.091	0.062	0.177*	0.170*	0.103	-0.051	-0.049	0.192	0.209**	-0.250	0.152	0.205**	0.110

Notes: *** p < 0.01, ** p < 0.05, * p < 0.1. See Appendix for variable definitions.

Table 4

Analysis of variance on the association between audit committee chair overlap and internal audit practices.

Number of other committees served by the Audit Committee Chair (ACOVLAP)	N	PRACTICE-IPPF/ISPPIA Mean (SD)	PRACTICE-RISK Mean (SD)	PRACTICE-CHARTER Mean (SD)	PRACTICE-COMPOSITE Mean (SD)
0	20	0.65 (0.489)	0.90 (0.308)	0.70 (0.470)	0.75 (0.303)
1	21	0.33 (0.483)	0.71 (0.463)	0.43 (0.507)	0.49 (0.227)
2	59	0.24 (0.429)	0.69 (0.464)	0.36 (0.483)	0.43 (0.304)
		F-value = 6.205***	F-value = 1.684	F-value = 3.758**	F-value = 9.204***

Notes: *** p < 0.01, ** p < 0.05, * p < 0.1. See Appendix for variable definitions.

To provide additional insight on the association between ACOVLAP and internal auditing practices, we perform ANOVA to determine whether the means of PRACTICE-IPPF/ISPPIA, PRACTICE-RISK, PRACTICE-CHARTER, and PRACTICE-COMPOSITE between the three overlap groups (ACOVLAP = 0, ACOVLAP = 1, and ACOVLAP = 2) are significantly different.⁴ The results are presented in Table 4. There is a significant association between AC chair overlap and poor internal auditing practices relating to not adopting internal auditing standards and not establishing an internal audit charter, providing preliminary support for the overcommitment hypothesis.

Table 5 presents the ordinary least squares (OLS) regression results of regressing the composite score of all three IAF practices (PRACTICE-COMPOSITE) on the explanatory variables and a set of control variables. The regression analysis yields an F-value of 5.34 and is highly significant (p < 0.01). The OLS regression model has a good fit, with an adjusted R² of 0.30. This means that 30% of the variation in IAF quality can be explained by the set of predictors, namely, AC chair overlap (ACOVLAP), AC chair financial expertise (ACFEXP), and the selected control variables. The largest significant beta coefficient is - 0.124, which is AC chair overlap. This means that AC chair overlap shows the strongest association with IAF quality. This result implies that IAF quality is lower if the AC chair also sits on other board committees, which supports H1 (the overcommitment hypothesis but not the reputation/knowledge spillover hypothesis).

The result suggests that the higher degree of overlapping of AC chair leads to lower IAF quality, suggesting overcommitment by the AC chair, consistent with Liao and Hsu (2013), Tanyi and Smith (2015), Karim et al. (2016), and Fernández Méndez et al. (2017). It also complements Gal-Or et al. (2018) who show that directors who only serve on the AC receive higher approval rates during directors' elections than AC members who serve on the AC and other board committees. Meanwhile, the coefficient for AC chair accounting financial expertise is not significant. Thus, H2 is not supported. Further, the beta value for total debt to total assets is significant at a 5% level, indicating that highly leveraged firms tend to have better IAF quality.

Multivariate logistic regressions examine the effect of the test variables on three dummy dependent variables, namely, PRACTICE-IPPF/ISPPIA, PRACTICE-RISK, and PRACTICE-CHARTER. As seen from Table 6, the results show that AC chair overlap has a significant and strong negative relationship with PRACTICE-IPPF/ISPPIA and PRACTICE-CHARTER at 1% level and 5%, respectively. In sum, AC chair overlap signals an undesirable corporate governance mechanism because the additional workload through memberships in other committees prevents the busy AC chair from devoting sufficient time to oversee the IAF. The coefficient for AC chair accounting financial expertise is positively significant at 1% level with PRACTICE-RISK. The result shows that ACFEXP is associated with the likelihood that the IAF adopts a risk-based approach. This finding is in line with Abernathy et al. (2014) and Baatwah et al. (2019), who find that AC chairs possessing accounting expertise is associated with timelier financial reporting. It is also consistent with Gal-Or et al. (2018) study highlighting that the shareholder approval rate of AC chairs who are not accounting experts is lower than that of other AC members.

As for control variables, the relationship between market capitalization (LNSIZE) is significantly positive at a 5% level with PRACTICE-IPPF/ISPPIA. The other control variable, LEVERAGE, also shows a significant relationship at a 5% level with PRACTICE-IPPF/ISPPIA and PRACTICE-CHARTER.

4.3. Additional tests

To provide some comfort that the IAF practices we use are good indicators of IAF effectiveness, we run regressions on PRACTICE-IPPF/ISPPIA, PRACTICE-RISK and PRACTICE-CHARTER against audit report timeliness. External auditors are encouraged to consider internal auditing activities, and effective IAF is expected to shorten the audit delay in line with the audit risk model. The results are shown in Tables 7 and 8. We include two additional variables commonly used in the audit delay model, namely, frequency of AC meetings (ACMEET) and the number of product segments (PRODSEG) (Wan-Hussin & Bamahros, 2013; Wan-Hussin, Bamahros, & Shukeri, 2018; Durand, 2019; Habib, Bhuiyan, Huang, & Miah, 2019). Two IAF practices, PRACTICE-CHARTER and PRACTICE-RISK, are associated with significantly shorter audit delays. In other words, external auditors tend to rely on the work of internal auditors in firms that have internal audit charters and implement risk-based internal auditing. Further, the composite measure of internal audit effectiveness is also associated with timelier

⁴ We thank the reviewer for suggesting this. However, we are not able to determine whether the AC chair sitting on a nomination committee is more "detrimental" to internal audit practices than the AC chair sitting on a remuneration committee due to rare occurrence of the latter.

Table 5
OLS regression on determinants of composite internal audit practices.

	Expected sign	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	B	t	Sig.
(Constant)		−0.781	0.449		−1.739	0.086
ACOV LAP	?	−0.124	0.035	−0.318	−3.503	< 0.01***
ACFEXP	+	0.086	0.062	0.131	1.383	0.170
ACSIZE	+	0.063	0.040	0.145	1.567	0.121
ACTENURE	−	−0.006	0.004	−0.125	−1.306	0.195
BSIZE	?	−0.027	0.016	−0.164	−1.669	0.099*
BIND	+	0.315	0.270	0.112	1.167	0.246
IASOURCE	+	0.079	0.091	0.088	0.864	0.390
LNIACOST	+	0.007	0.031	0.032	0.221	0.825
LNSIZE	+	0.066	0.036	0.219	1.864	0.066*
LEVERAGE	+	0.005	0.002	0.259	2.755	< 0.01***

Dependent Variable = PRACTICE-COMPOSITE $R^2 = 0.375$ Adjusted $R^2 = 0.305$ $F = 5.340$ Sig = ≤ 0.01 .

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. See Appendix for variable definitions.

Table 6
Logistic regressions on determinants of individual internal audit practices.

	Expected Sign	PRACTICE-IPPF/ ISPPA			PRACTICE-RISK			PRACTICE- CHARTER		
		B	Wald	Sig.	B	Wald	Sig.	B	Wald	Sig.
ACOV LAP	?	−1.028	8.730	< 0.01***	−0.416	1.213	0.271	−0.688	4.901	0.027***
ACFEXP	+	−0.482	0.615	0.433	1.523	6.555	< 0.01***	0.373	0.468	0.494
ACSIZE	+	0.477	1.549	0.213	0.293	0.489	0.484	0.358	1.030	0.310
ACTENURE	−	−0.071	2.279	0.131	0.048	1.243	0.265	−0.079	3.310	0.069*
BSIZE	?	−0.253	2.210	0.137	−0.090	0.351	0.553	−0.140	1.042	0.307
BIND	+	3.893	2.401	0.121	−1.137	0.177	0.674	2.055	0.774	0.379
IASOURCE	+	−0.812	0.901	0.342	0.804	1.068	0.301	1.029	1.223	0.269
LNIACOST	+	−0.146	0.246	0.620	0.153	0.259	0.611	0.169	0.347	0.556
LNSIZE	+	0.848	5.362	0.021**	0.339	0.857	0.355	−0.007	0.000	0.984
LEVERAGE	+	0.040	5.220	0.022**	0.003	0.036	0.849	0.039	6.017	0.014**
Constant		−11.334	6.513	0.011**	−7.384	2.311	0.128	−4.086	1.060	0.303
Log Likelihood				98.01			111.312			97.86
Cox & Snell R^2				0.26			0.23			0.15
Nagelkerke R^2				0.36			0.31			0.23
Hosmer and Lemeshow				5.55			6.28			4.91

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. See Appendix for variable definitions.

issuance of audited financial statements, as shown in Table 8. Most control variables are significant in the expected directions, and the audit delay model incorporating several internal audit practices can explain at least 40% of the cross-sectional variations. Audit chair tenure is associated with shorter delays, consistent with the work of Al-Absy et al. (2019), who find that longer tenure for the AC chair is associated with less earnings management in Malaysia.

Mindful that the AC chair workload is not only limited to overlapping board committees within the same firm but can be exacerbated by multiple directorships and full-time management positions in other organizations (Jaafar et al., 2016), we include indicators for whether the AC chair (1) has directorships in other public companies and (2) has full-time management positions at other organizations.⁵ As shown in Table 9, 76% and 19% of the AC chairs hold multiple directorships (ACMULT = yes) and executive positions in other organizations (ACEXEC = yes), respectively. The chi-square results indicate no association between AC chair overlap and multiple directorships (Panel A) and between AC chair overlap and holding external executive positions externally (Panel B). After including the two additional control variables to indicate busyness (ACMULT and ACEXEC) in the regression analysis, the main results that AC chair overlap is associated with less effective internal auditing practices hold. In addition, we find that AC chairs with multiple directorships are associated with a lack of disclosure on compliance with the IIA standards (untabulated).

Finally, we rerun the regressions shown in Tables 5 and 6 by relaxing the AC chair accounting financial expertise to include those without accounting qualification but possessing relevant work experience (see footnotes 3 and a in the Appendix). Again, the main results are qualitatively similar (untabulated).

⁵ We thank the anonymous reviewer for this suggestion.

Table 7
OLS regression on audit report timeliness and individual internal audit practices.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	B		
(Constant)	248.074	34.076		7.280	< 0.01
PRACTICE-IPPF/ISPPA	-3.210	4.697	-0.058	-0.683	0.496
PRACTICE-RISK	-11.000	4.997	-0.185	-2.201	< 0.01***
PRACTICE-CHARTER	-11.984	4.529	-0.229	-2.646	< 0.01***
ACOV LAP	-0.426	2.845	-0.013	-0.150	0.881
ACFEXP	2.274	4.881	0.041	0.466	0.642
ACTENURE	-0.966	0.344	-0.252	-2.812	< 0.01***
ACMEET	4.766	1.274	0.331	3.742	< 0.01***
LNIACOST	-6.110	2.259	-0.342	-2.705	< 0.01***
LNSIZE	-7.263	2.855	-0.286	-2.544	0.013**
LEVERAGE	0.556	0.130	0.360	4.287	< 0.01***
PRODSEG	4.240	1.202	0.310	3.527	< 0.01***
R ² = 0.488 Adjusted R ² = 0.295F = 7.616 Significance = < 0.01					

Notes: *** p < 0.01, ** p < 0.05, * p < 0.1. ACMEET is number of audit committee meetings during the financial year and PRODSEG is number of product segments. The remaining variables are defined in the Appendix.

Table 8
OLS regression on audit report timeliness and composite internal audit practices.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	243.302	33.860		7.186	< 0.01
PRACTICE-COMPOSITE	-27.274	7.724	-0.326	-3.531	< 0.01***
ACOV LAP	-1.035	2.805	-0.032	-0.369	0.713
ACFEXP	1.299	4.784	0.024	0.272	0.787
ACTENURE	-1.000	0.335	-0.261	-2.984	< 0.01***
ACMEET	4.763	1.257	0.331	3.788	< 0.01***
LNIACOST	-6.628	2.234	-0.371	-2.966	< 0.01***
LNSIZE	-6.463	2.801	-0.255	-2.307	0.023**
LEVERAGE	0.559	0.129	0.362	4.346	< 0.01***
PRODSEG	4.394	1.199	0.321	3.665	< 0.01***
R ² = 0.475 Adjusted R ² = 0.422F = 9.030 Significance = < 0.01					

Notes: *** p < 0.01, ** p < 0.05, * p < 0.1. ACMEET is number of audit committee meetings during the financial year and PRODSEG is number of product segments. The remaining variables are defined in the Appendix.

Table 9
Association between audit committee chair overlap and external directorships/management appointment.

Number of other committees served by the Audit Committee Chair (ACOV LAP)	Panel A Audit Committee Chair holds directorships in other public companies (ACMULT)		Panel B Audit Committee Chair holds full-time management position in other organizations (ACEXEC)	
	Yes	No	Yes	No
0	17 (85%)	3 (15%)	4 (20%)	16 (80%)
1	15 (71%)	6 (29%)	4 (19%)	17 (81%)
2	44 (75%)	15 (25%)	11 (19%)	48 (81%)
	76	24	19	81
	Pearson Chi-square = 1.194 (p value = 0.550)		Pearson Chi-square = 0.018 (p value = 0.991)	

Notes: ACMULT is dummy variable "1" if audit committee chair is also director in other public companies, "0" otherwise, ACEXEC is dummy variable "1" if audit committee chair holds senior management position in other organization, "0" otherwise. The remaining variables are defined in the Appendix.

5. Conclusion

Despite the various organizational benefits that can be derived from an effective IAF, the extant literature explaining the factors associated with exemplary internal auditing practices remains in its infancy (DeFond & Zhang, 2014; Roussy, 2015).

In this study, we examine the role of the AC chair in shaping internal audit practices. More specifically, the study focuses on whether the AC chair's membership in other board monitoring committees and accounting financial expertise are associated with effective internal audit oversight and a well-governed IAF.

Logistic and OLS regressions tested the relationships between the variables. The sample comprises the Top 100 nonfinancial companies listed on Bursa Malaysia based on market capitalization in 2014. This study uses three criteria to indicate IAF effectiveness, namely compliance with internal auditing standards, adoption of a risk-based internal audit plan, and the existence of an internal audit charter. The findings reveal that AC chair overlap and AC chair accounting financial expertise are significantly associated with certain IAF practices. AC chair overlap has a significantly negative association with internal auditing standards compliance and the existence of an internal audit charter, whereas AC chair accounting financial expertise has a significantly positive association with the adoption of a risk-based internal audit plan. Our results suggest that investors can take comfort that internal controls over financial reporting, risk management, and governance practices seem to be more developed when the AC chair is not overburdened with overlapping memberships in other board committees and has accounting financial expertise. Thus, our results echo Higgs (2003) who deemed it undesirable for audit committee directors to be members of other board monitoring committees, and reinforces the finding by Tanyi and Smith (2015) in the US. However, it is at odds with Ghafran and Yasmin (2018) study in the UK. Although this study deepens our understanding of the consequence of AC chair overlap, there is still much to learn about its pros and cons, which we encourage future research to explore. In addition, our study also suggests that the AC chair financial expertise matters in fortifying the internal audit practices, which offers useful empirical guidance for the regulators who wish to revisit this contentious policy issue.

There are several caveats in the study that should be recognized when interpreting the evidence presented. As the data only cover a one-year period and originate from the Top 100 nonfinancial firms listed on Bursa Malaysia, the findings are possibly not generalizable across other time periods and countries. While we believe that AC chair overcommitment through memberships in other committees affects the chair's ability to monitor and engage with the IAF, our study only finds an association – not causation. Future research can perform change analysis looking at what happens when a company gets an accounting financial expert for the first time or when the chair overlaps for the first time. Such studies require multiple years of data that allow researchers to look at changes in expertise and busyness and to see how these changes impact internal auditing practices.⁶ Another interesting avenue for future research is to examine the influence of CAE competence and IAF staff strength on organizational outcomes, as this information is now available in annual reports of Malaysian firms since 2018.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Wan Nordin Wan-Hussin reports financial support was provided by Malaysia Ministry of Higher Education.

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Appendix

Variable Definitions

Variable	Expected Sign	Definition
PRACTICE-IPPF/ ISPPA	Not applicable	"1" if a company declares internal audit follows internal auditing standards, "0" otherwise
PRACTICE-RISK	Not applicable	"1" if a company declares internal audit adopts risk-based internal audit, "0" otherwise
PRACTICE- CHARTER	Not applicable	"1" is given if a company declares it has an internal audit charters, "0" otherwise
PRACTICE- COMPOSITE	Not applicable	sum of PRACTICE-IPPF/ISPPA, PRACTICE-RISK and PRACTICE-CHARTER, divided by 3
ACOV LAP	?	"0" if audit committee chair sits on audit committee only; "1" = if audit committee chair sits on either nomination committee or remuneration committee; "2" = if audit committee chair sits on both nomination committee and remuneration committees

⁶ We thank the anonymous reviewer for this suggestion.

(continued)

Variable	Expected Sign	Definition
ACFEXP	+	"1" if audit committee chair has accounting degree or accounting professional qualifications ^a , "0" otherwise
ACSIZE	+	number of directors on the audit committee
ACTENURE	–	number of years the audit committee chair has been a director within the firm
BSIZE	?	number of board members
BIND	+	percentage of independent directors on board
IASOURCE	+	"1" if internal audit is provided entirely in-house, "0" otherwise
LNIACOST	+	natural log of investment in internal audit
LNSIZE	+	natural log of market capitalization
LEVERAGE	+	total debts divided by total assets

^aIn subsequent analysis, we rerun the model by treating AC chair without accounting qualification but possessing relevant work experience (such as holding previous or current position as executive chairman, managing director, chief executive officer, chief operating officer, chief financial officer, financial controller, or auditor) as a financial expert

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