

The Internal Audit Functions and Profession in Singapore: Current Trends, Issues and Perspectives 2006



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Terence Ng

Low Kin Yew

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Mission

To be the primary body in Singapore representing, promoting and developing the professional practice of internal auditing.

Core Objectives

THE CORE OBJECTIVES OF IIA SINGAPORE ARE:

- To provide practising internal auditors with a forum for exchanging ideas and expertise on matters of common interest.
- To develop the skills of practising internal auditors.
- To enhance the usefulness of practising internal auditors to the management they serve.
- To enhance the professional status of internal auditing in Singapore.
- To seek to develop a mutual understanding between interested parties of the possibilities and benefits of professional internal auditing.



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Core Objectives

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- To act as a forum for exchange of information on issues relating to corporate governance and directorship in Singapore. The SID plays a leading role in holding discussions and providing feedback to the authorities on matters of concern.
- To organise and conduct professional training courses and seminars to meet the needs of its members and company directors generally. Such courses aim to continually raise the professional standards of directors in Singapore by helping them enhance their effectiveness through acquisition of knowledge and skills.
- To regularly publish newsletters, magazines and other publications to update members on relevant issues and keeping them informed of latest developments. These publications also serve as reference materials for company directors.
- To be responsible for the discipline of members. The SID has drawn up a code of conduct for directors in Singapore as minimum standards of compliance in discharging their fiduciary duties.

About the authors

Charlene Geisler is an Assistant Professor in the Accounting Division of Nanyang Business School at Nanyang Technological University. Prior to joining NTU, she worked as an auditor with an international CPA firm in Singapore. She obtained her Ph.D. from the University of Texas at Austin specializing in behavioural accounting research. Charlene is a member of the Institute of Certified Public Accountants of Singapore and the American Accounting Association. She teaches the Accounting for Decision Making and Control course at NTU and has published in *Accounting and Business Review* in the area of assurance services. Her research has also been presented at the International Symposium on Audit Research and the American Accounting Association Annual Conference.

Low Kin Yew is an Assistant Professor in the Accounting Division of Nanyang Business School at Nanyang Technological University. Prior to joining NTU, he worked as an auditor with an international CPA firm in Singapore and Sydney, Australia. He obtained his Ph.D. from the University of Illinois at Urbana-Champaign specializing in behavioural accounting research. Kin Yew is a member of the Institute of Certified Public Accountants of Singapore, the Institute of Chartered Accountants in Australia and the American Accounting Association. He teaches the Assurance and Attestation course at NTU and has published in *The Accounting Review* in the area of auditor judgment. His research has also been presented at the International Symposium on Audit Research and the American Accounting Association Annual Conference.

Terence Ng is an Associate Professor in the Accounting Division of Nanyang Business School at Nanyang Technological University. Prior to joining NTU, he worked as an external auditor with an international CPA firm in Singapore and an internal auditor in a public listed company. He obtained his Master of Commerce (Honours) degree from the University of New South Wales in Sydney Australia and his Ph.D. from Nanyang Technological University. Terence is a member of the Institute of Certified Public Accountants of Singapore and the American Accounting Association. He teaches the Assurance and Attestation course at NTU and has published in *Abacus*, *Auditing: A Journal of Practice and Theory*, and *The Accounting Review* in the areas of auditor judgment and corporate governance. His research has also been presented at the International Symposium on Audit Research, the American Accounting Association Auditing Section Mid-Year Conference, and the Accounting Association of Australia and New Zealand (AAANZ) Conference.

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1. Introduction

1.1 Objectives

This study was commissioned by the Institute of Internal Auditors Singapore (IIAS) to provide evidence on the current trends, issues and perspectives relating to the internal audit (IA) functions and profession in Singapore. It involves a survey of internal auditors, audit committee members (ACMs), chief executive officers (CEOs), and chief financial officers (CFOs) of various organizations in Singapore. The survey was administered by the authors from Nanyang Business School with the assistance of the IIAS and the Singapore Institute of Directors. The latter was invited to collaborate in the study to provide logistical support and insights on matters relating to directors in Singapore.

Specifically, the study seeks to shed light on the following:

- Organisational and personal profile of internal auditors
- Profile and practices of internal audit departments (IADs)
- Audit committees' role and interactions with the IAD
- External auditors' role and interactions with the IAD
- Perspectives of ACMs, CEOs and CFOs on in-house and outsourced IA functions
- Perspectives of internal auditors on current issues and developments facing the IA functions and profession

1.2 Motivation

Over the last decade, the corporate world in Singapore and abroad has witnessed and experienced many far reaching changes and developments that directly affected the management, conduct and regulation of businesses. A spate of recent high profile corporate frauds and scandals (e.g., Accord Customer Care Solutions, China Aviation Oil, Enron, WorldCom) has prompted regulators and stakeholders worldwide to take a closer look at the state and adequacy of current corporate governance practices. The re-examination brought about several new legislations and reforms, including the passing of the Sarbanes-Oxley Act (2002) in the United States and, closer to home, the Accounting and Corporate Regulatory Authority Act 2004 and the revised Accountants Act 2004 in Singapore. The Council on Corporate Disclosure and Governance also responded by revising the Code of Corporate Governance in 2005. The revised Code continues to recognize the importance and value of an independent IA function in promoting good corporate governance, and specifically, entrusts the audit committee with the responsibility of ensuring an effective IA function.

The trust in internal auditors in promoting effective corporate governance is well placed. According to the Association of Certified Fraud Examiners' latest "2006 Report to the Nation on Occupational Fraud and Abuse," about 20% of the reported fraud was initially detected by an IA function, which is third only to tips (34%) and accidental discovery (25%) as the most common methods of fraud detection. The report further points out that organisations with an IA function suffered a median loss

arising from fraud of USD120,000, compared to USD218,000 for organisations without an IA function. Similarly, in a 2004 survey of fraud in Singapore, KPMG reported that 21% of the discovered fraud was detected by an IA function—the third most common fraud detection method, after management review and anonymous tips.

In view of the important role of IA functions in corporate governance, the current study seeks to provide an overview of how the IA functions and profession in Singapore have evolved and responded to current local and international developments and trends. More specifically, we provide a description of the current profiles of internal auditors and their IADs. We also examine the current IA roles and practices as well as internal auditors' interactions with their organisations' audit committee and external auditors. In addition, we review the trends and compare the roles and activities of in-house vs. outsourced IA functions. Lastly, we report the views and concerns of internal auditors about issues and developments affecting the IA functions and profession. To provide a more comprehensive and balanced view on the IA functions and profession, we surveyed ACMs, CEOs and CFOs of listed companies as well as IA personnel (managers and staff) from both listed and non-listed organisations. We hope the findings from this study will promote a better understanding of the current status and issues facing the IA functions and profession in Singapore among the various stakeholders and regulatory bodies, and serve as a conduit for coordinated efforts in strengthening the role and effectiveness of internal auditors in enhancing corporate governance practices in Singapore.

The current study follows up and extends on a previous study of internal auditors in Singapore conducted in 1996. The current study differs from the 1996 study in two main ways. First, the 1996 study surveyed internal audit managers and CEOs. In this study, we extended the study to include ACMs, CFOs, and IA staff members. This broadens the perspective and relevance of our findings and addresses the interests of a wider and diverse group of concerned stakeholders and parties. Second, we investigated several new issues (such as IA outsourcing, the Sarbanes-Oxley requirements) that were not prevalent during the 1996 study. Nonetheless, the findings from the 1996 study serve as a useful comparative base for the findings of the current study and we made selective references to the 1996 findings in our discussion of the survey results to provide some evidence on the trends in the profiles and practices of IA functions and professionals in Singapore over the past decade.

1.3 Organisation of Report

The remaining report is organised as follows: Chapter 2 states the key findings of our study. The research methodology used is described in Chapter 3. This is followed by a detailed analysis of the results and discussion of the findings in Chapter 4. Finally, we conclude this report in Chapter 5 with a discussion of the study's key findings and potential implications, as well as its limitations and avenues for future research.

2. Summary of Key Findings

The key findings of the study are as follows:

2.1 Organisational Profile of Internal Auditors

- The highest proportion of the internal audit managers (IAMs) are from organisations in the manufacturing industry (27%), followed by the finance industry (19%).
- The IAMs' organisations are significantly larger than those in the 1996 study, with an average (median) of 30,552 (1,250) full-time employees and an average (median) total revenue of S\$7.4 billion (\$700 million) in the last financial year.
- Thirty-one percent of the IAMs' organisations are listed on the Singapore Exchange and 35% are listed in a foreign stock exchange (mainly in the U.S.). The foreign-listed companies are significantly larger in size than the SGX-listed companies and non-listed organizations.

2.2 Personal Profile of Internal Auditors

- The IAMs and internal audit staff (IAS) have an average age of 41 years and 35 years respectively.
- A high proportion of the IAMs (77%) and IAS (79%) have a bachelor or higher degree, mainly in the field of Accountancy. The majority of them (60% of IAMs and 58% of IAS) graduated from local tertiary institutions, with the highest proportion from Nanyang Technological University.
- Both the IAMs and IAS have significant IA experience, with an average of 11.2 years and 6.1 years respectively. They also have considerable working experience in their current organisation and the IAD, with the IAMs having spent an average of 6.6 years in the current organisation and 5.4 years in the IAD, and the IAS having spent an average of 4.9 years in the current organisation and 3.9 years in the IAD.
- All the IAMs and 86% of the IAS hold one or more memberships in various professional organisations. Eighty-five percent of the IAMs and 49% of the IAS are members of the Institute of Internal Auditors Singapore (IIAS) and 58% of the IAMs and 42% of the IAS are members of the Institute of Certified Public Accountants of Singapore (ICPAS). A significant number of the IAMs and IAS also hold one or more professional qualifications certified by these professional organisations. Specifically, 33% of the IAMs and 20% of the IAS hold the Certified Internal Auditor (CIA) qualification, while 58% of the IAMs and 46% of the IAS hold the Certified Public Accountant (CPA) qualification. Although less than half of the IAMs hold the CIA qualification, the proportion is significantly higher than the 2% in the 1996 study.

- In terms of compensation, 65% of the IAMs and 20% of the IAS earn above S\$100,000 per annum. The IAMs' compensation is positively related to the extent of their IA experience whereas the IAS's compensation is positively related to the extent of both their IA and external auditing experience.

2.3 Profile and Practices of Internal Audit Departments (IADs)

- Three quarters of the IAMs' IADs report functionally to the Audit Committee (AC) while only a small percentage (6%) report functionally to either the CEO or CFO. About half of the IADs report administratively to the CEO and about a quarter report administratively to the CFO.
- The majority of the IADs (59%) have five or fewer IA staff. Only 38% of the IADs have one or more IT audit specialists.
- The IADs had an average budgeted expenditure of S\$954,000 in the last financial year, 74% of which were allocated to manpower cost and 4% to training.
- Thirty-one percent of the IADs outsource part of their IA activities, mostly to a CPA firm other than the incumbent external auditors.
- Eighty-one percent of the IADs have an audit charter. The most common areas covered in the charter include access to company documentation, scope of IA coverage, independence from activities audited and reporting lines.
- Consistent with IIA's definition of internal auditing, the IAMs consider their IADs to play both assurance and consulting roles in their organisation.
- Almost all IADs provide traditional IA services such as appraising information and internal control systems (94%), safeguarding of organisational assets (98%) and compliance with internal (100%) and external (93%) policies and regulations. A significant proportion of IADs are also involved in appraising the reliability of operational and financial reporting information, assessing, detecting and investigating fraud, and reviewing the organisation's information security and risk management system, among others.
- The IAMs consider operational auditing and financial auditing to be relatively more important than information systems/technology (IS/IT) auditing, internal consultancy and environmental auditing.
- The most common audit methodologies and tools used by the IADs in the conduct of internal audits are the risk-based audit approach (90%) and detailed audit programs (77%). The majority of the IADs (63%) also employ one or more computer-assisted audit techniques, mainly generalized audit software.
- Sixty-five percent of the IAM's organisations use one or more internal control frameworks for the implementation, review and monitoring of internal controls, mainly the COSO internal control integrated framework.

- In the last five years, 31% of the IADs have undergone an internal quality assessment but only 13% have undergone an external quality assessment. However, 35% of the IAMs indicate that their IADs are either in the process of undergoing an external quality assessment or would do so in the near future. The most common reason for not having an external quality assessment is high cost, followed by the lack of perceived benefits and organisational support.
- The most common forms of training provided to IAS are formal outside training programs (95%) and on-the-job training (85%). The majority of the IAMs' organisations provide support for various forms of professional development activities, including external courses leading to formal qualifications (such as CIA). Overall, the level of organisational support for internal auditors' professional development activities has increased significantly since 1996.

2.4 Audit Committees' Role and Interactions with the IAD

- The majority (88%) of the IAMs' organisations have an audit committee (AC). Among the ACs, 76% comprise all non-executive members, 88% have a majority of independent directors, and all but one have at least one AC member with financial expertise.
- The most common IA-related functions performed by the ACs are reviewing IA findings and recommendations (88%) and approving IA plans (79%).
- In the last financial year, the ACs held an average of five meetings with the internal auditors. The most common matters discussed during these meetings are IA plans (100%), major IA findings and recommendations (93%) and management's follow-up of IA findings and recommendations (93%).
- The IAMs and IAS generally perceive the AC to be effective in discharging their various functions.

2.5 External Auditors' Role and Interactions with the IAD

- The extent of IADs' involvement in the external audit is relatively low, with about a third of the IADs having no involvement at all. In the last financial year, the external auditors held an average of two meetings with the internal auditors. The most common matters discussed during these meetings are major IA findings and recommendations (86%) and IA plans (74%).
- In general, the IAMs perceive that there are positive outcomes relating to their interactions with the external auditors. Specifically, the interactions lead to better communication to help resolve issues as well as an improvement in the organisation's operations.

- Both the IAMs and IAS perceive the external auditors to be quite effective in maintaining independence and objectivity and in improving the quality of financial report, but relatively less effective in involving the internal auditors in the external audit.

2.6 Trends, Practices and Other Perspectives Relating to Outsourced (vs. In-House) Internal Audit Functions

- A majority (84%) of the ACM (audit committee members) and MGT (chief executive officers and chief financial officers) respondents' organisations have an IA function, 55% of which are fully outsourced and 36% of which are fully in-house.
- The ACM and MGT respondents with an outsourced IA function indicate that they are highly likely to continue to outsource at least part of their IA function in the next three years, suggesting that the demand for IA outsourcing is likely to continue. The main reasons cited for the decision to outsource IA functions include the high cost of maintaining an in-house IA function and the perceived effectiveness of outsourced providers in certain areas.
- There is no major difference between the reporting levels of outsourced and in-house IA functions except that outsourced IA functions are more likely to report administratively to the CFO than in-house IA functions, who are, in turn, more likely to report administratively to the CEO than outsourced IA functions.
- Organisations with a fully in-house IA function are larger in size than those with a fully outsourced IA function. Consequently, the average annual budgeted expenditure of in-house IA functions is also significantly larger (\$464,000) than that of outsourced IA functions (\$52,000).
- In general, in-house IA functions perform a broader range of IA services than outsourced IA functions. Some of the services that in-house IA functions are significantly more likely to provide include detecting and investigating fraud, providing internal consultation to management, assisting the external auditors, and reviewing information security and data privacy issues.
- The ACM and MGT respondents with an in-house IA function perceive IS/IT auditing to be more important than those with an outsourced IA function. They also agree more strongly that their IA function adds value to the organisation and have good working relationships with the management, AC, external auditors and auditees than those with an outsourced IA function.

2.7 Perspectives on Current Issues and Developments Facing the Internal Audit Functions and Profession

- A quarter of the IAMs' organisations and 6% of the ACM and MGT respondents' organisations are required to undergo an assessment of the effectiveness of controls over financial reporting as a result of the Sarbanes-Oxley Act (2002).

- The IAMs are highly supportive of the requirement for management to report their assessment of financial reporting control effectiveness either in the annual report or to the AC or Board of Directors. However, the ACM and MGT respondents are more supportive of the requirement for management to provide an annual assessment of the effectiveness of financial reporting controls to the AC or BOD than to disclose the assessment in the annual reports. In terms of attestation requirements, the IAMs are more supportive of attestation on management's assessment of financial reporting control effectiveness by external auditors than by internal auditors, while the ACM and MGT respondents are indifferent to whether such attestation is provided by external or internal auditors.
- About two-thirds of the IAMs' organisations and one-third of the ACM/MGT respondents' organisations have implemented whistle-blowing mechanisms. The in-house IADs are highly involved in the implementation and/or monitoring of their organisation's whistle-blowing mechanisms.
- The IAM, ACM and MGT respondents generally agree that the IA function has the independence, knowledge and skills to effectively implement and/or monitor whistle-blowing mechanisms in their organisation.
- The three most significant problem areas faced by IADs are difficulty in retaining good IA staff, lack of IT audit skills, and difficulty in keeping abreast with professional developments.
- The IAMs strongly agree that their IAD plays an important role in the organisation's corporate governance and makes significant contributions to the organisation's effectiveness and success. They also generally enjoy good working relationships with various parties, especially with the AC, and are generally satisfied with their status in the organisation. However, they are relatively less satisfied with auditees' understanding of the IA function as well as with their total compensation package.
- The IAMs are generally positive about the future job opportunities for internal auditors, but they strongly believe that the IAS needs a more effective strategy to promote the public awareness and recognition of the IA profession in Singapore.
- Three-quarters of the ACM and MGT respondents view their IAD as providing long-term IA career prospects, and about two-thirds of them view their IAD as providing opportunities for promotion to management positions outside of IA.
- An overwhelming majority of the ACM and MGT respondents view Accounting as the most desirable academic discipline for IA staff.
- The ACM and MGT respondents are generally more familiar with the Institute of Certified Public Accountants of Singapore (ICPAS) than with the IAS. A significant proportion of the respondents (42%) first came to know about the IAS through the current study, with another 34% through newspapers, public media and other publications.

2.8 Some Salient Comparisons with the 1996 Findings

- Although 85% of the IAMs in the current study are members of the IIAS (compared to 70% in 1996), only 33% have obtained the CIA qualification. This is, however, significantly higher than the 2% in the 1996 study, suggesting that the CIA qualification has gained increasing acceptance within the internal audit profession in Singapore over the past decade. This could be attributed, in part, to a greater proportion of the IAMs' organizations providing support for external courses leading to formal qualifications (52% compared to 26% in 1996), as well as greater efforts by the IIAS to promote the CIA qualification.
- In the 1996 study, it was reported that 28% of the IAMs report to the AC while 45% report to the CEO. (Note: Unlike the current study, the 1996 study did not distinguish between functional and administrative reporting relationships). In the current study, 77% of the IAMs report functionally to the AC compared to only 6% reporting functionally to the CEO or CFO. This is in contrast to only 2% reporting administratively to the AC compared to 81% reporting administratively to the CEO or CFO. The high proportion of IAMs reporting directly to the AC is in line with the recommendations of the Singapore Code of Corporate Governance and contributes towards greater independence of the IA function.
- Similar to the 1996 findings, the IAMs in the current study indicate that operational auditing is the most important area of audit, followed by financial auditing. Despite the increasing importance of IT auditing, the proportion of IADs with IT audit specialists in the currently study (38%) has not increased from 1996 (39%). Not surprisingly, the lack of IT audit skills is widely cited by the IAMs in the current study to be one of the major concerns faced by their IADs.
- The outsourcing of internal audit activities has increased since 1996. Thirty-one percent of the IAMs in the current study (compared to 18% in 1996) indicate that an average of 24% of IA activities (less than 25% in 1996) is currently outsourced. Among the MGT respondents in the current study whose organizations have an IA function, 55% of the IA functions are fully outsourced. The 1996 study reported that only 3% of the IAMs' organizations have fully outsourced their IA function, although no corresponding data is available for the CEO respondents.
- Although the IAMs in both studies generally agree that the internal audit function will be increasingly important to their organizations, the size of the IAD has not increased significantly over the past 10 years, with the majority of IADs (59% in the current study compared to 69% in 1996) having five or fewer IA staff. Moreover, retaining good IA staff is the problem area most frequently cited by the IAMs in both studies. The IAMs in both studies view the IIAS as playing a critical role in helping to promote the public awareness and recognition of the IA profession in Singapore.

3. Research Methodology

3.1 Survey Respondents

The primary population of our survey comprises IAMs in both listed and non-listed organisations in Singapore. We managed to identify 174 companies listed on the Singapore Exchange that have an IA function based on disclosures in their latest available annual reports. Another 194 non-listed organisations with an in-house IA function are identified from the IAS's membership database. Hence, we sent the IAM survey questionnaires to a total of 368 organisations' IAMs. In addition, to provide a broader profile and perspective of internal auditors in Singapore, we requested the IAMs to distribute a shorter version of the IAM questionnaire to three of their organisation's more senior IAS.

We also surveyed two other groups of respondents from companies listed on the Singapore Exchange about their views on their organisations' IA function as well as the IA profession in general. The two groups are the listed companies' ACMs and their CEOs and CFOs. While ACMs play a key role in ensuring the effectiveness of a company's IA function, CEOs and CFOs (hereafter "MGT") are key members of a company's top management and important users of IA services. Hence, the views of both groups on the IA function are relevant and informative given the objectives of our study. Overall, we sent the survey questionnaires designed for the ACM and MGT respondents to a total of 1,046 ACMs and 970 CEOs and CFOs.

3.2 Questionnaire Development

Prior to developing the questionnaires, we met up with several members of the IAS Board of Governors to discuss the objectives and scope of the study. We also used the findings of the 1996 study published by IAS as a guide. We updated the issues examined in the 1996 study with several new issues currently faced by the IA functions and profession in Singapore. We then developed one separate questionnaire for each of the three targeted populations—namely, the IAM, ACM and MGT groups. Based on our study's objectives, we added new questions and modified some questions so as to tailor the questionnaires to the targeted respondents. We also developed a shorter version of the IAM questionnaire for the IAS respondents mainly because we elicited factual information concerning their organisations' IADs from only the IAMs. Hence, other than demographic information, we elicited mainly personal observations and opinions from the IAS respondents. To ensure clarity and relevance of the survey questions, we sought the help of members of the IAS Board of Governors and the Singapore Institute of Directors (SID) in reviewing the questionnaires, and incorporated their comments and suggestions in the final questionnaires.

3.3 Survey Administration

We mailed the questionnaires to the respondents in late October/early November 2005, along with postage-paid reply envelopes addressed to one of the researchers at NTU. The respondents were assured of anonymity of their responses and told that the survey results would only be reported at the aggregated level. To encourage responses, the respondents were told that we would donate S\$5 for each completed survey to a charity organisation subject to a maximum donation of S\$5,000 in total. We included a donation form with the questionnaire that listed five charity organisations for the respondents to select from. In accordance with our instructions, we subsequently donated a sum of money based on the number of returned questionnaires, reported below, to the five charity organisations as indicated by the respondents. The donation came from a NTU Research Grant. For respondents who failed to return a completed donation form with their completed questionnaires, we donated S\$1 to each of the five stated charity organisations per respondent.

The respondents were given about a month to respond and return the completed questionnaire to us. We sent out a reminder letter to all the respondents after the initial deadline had lapsed. To create awareness and encourage participation in the study, the IAS and SID also emailed their members and announced the study in their electronic newsletters.

3.4 Response Rates

We received responses from 48 IAMs, 93 IAS, 35 ACMs, 16 CEOs, and 52 CFOs. The response rates of our different respondent groups are shown in Table 3.1 below.

Table 3.1: Response Rates of Various Respondent Groups

	IAM	IAS	ACM	MGT	Total
Total sample size	368	1,104	1,046	970	3,488
Responses received	48	93	35	68	244
Response rates	13%	8%	3%	7%	7%

The response rates of the current study are lower than those of the 1996 study where the response rate was 16% for IAMs and 15% for CEOs. The lower response rates for this study could be attributed to the length of the questionnaires (between eight to ten pages) and the timing of the survey (close to the December year-end). While low response rates are generally typical of survey studies conducted in Asia, readers should exercise caution when interpreting the results of this study, which may not be necessarily representative of the targeted populations.

3.5 Respondents' Profile

We reported the demographic information of the IAM and IAS respondents as part of the main findings in Chapter 4. This section focuses on the demographic background of the ACM and MGT respondents, which is presented in Table 3.2 below.

Table 3.2: Respondents' Age, Gender and Working Experience

	ACM	MGT
Average age (years)	58	44
Gender – Female	6%	25%
Male	94%	75%
Average number of years of working experience	34.0	19.6
Average number of years in current job title	n.a.	6.1
Average number of years serving/working in current organisation	4.6	8.6
Average numbers of years of working experience in:		
- Internal auditing	1.4	0.5
- External auditing (public accounting)	9.5	2.4
- Corporate financial accounting	6.2	8.4
- Corporate management accounting	8.9	9.2

The demographic information indicates that the majority of the ACM (94%) and MGT (75%) respondents are male. In addition, the ACM respondents are generally older and have more working experience than the MGT respondents. The ACM respondents also have significantly more external auditing experience on average than the MGT respondents. Both groups have quite similar extent of financial and management accounting and internal auditing experience on average. The MGT respondents, however, have been with their organisations for a longer period than the ACM respondents.

3.6 Data Analysis

Data were entered into Microsoft Excel spreadsheets and analysed with Excel and SPSS programs. Besides providing descriptive statistics (such as averages and proportions) of the respondents' responses, we also performed selected statistical tests to determine whether differences, if any, in the responses of the different respondent groups are statistically significant. Consistent with general statistical analysis practices, we used a significance level of 5%. Thus, an observed difference is statistically significant if it has a likelihood of occurrence by chance of 5% or less (alternatively, one can conclude with a 95% or higher confidence level that the difference is not a result of random chance).

4. Analyses and Findings

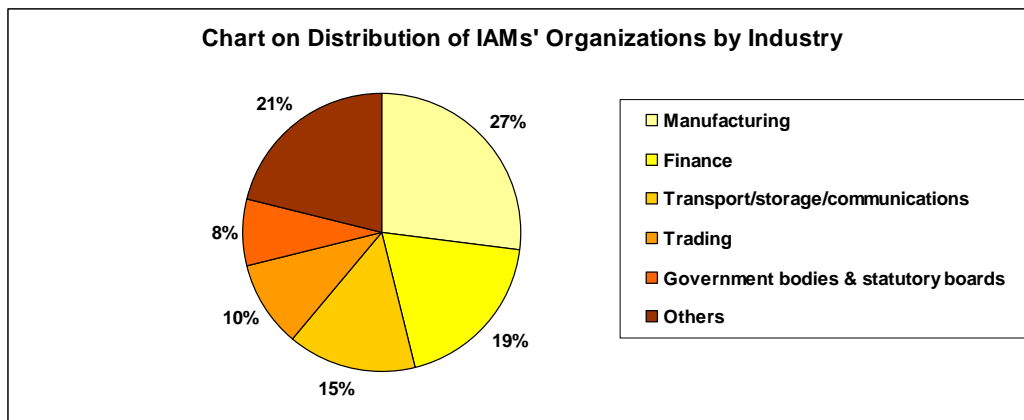
4.1 Organisational Profile of Internal Auditors

4.1.1 Industry

Table 4.1 presents the distribution of the IAMs' organisations by major industries. The highest proportion of the IAMs' organisations is in the manufacturing industry (27%), followed by the finance industry (19%). In contrast, 33% of the organisations in the 1996 study were in the finance industry while 18% were in the manufacturing industry.

Table 4.1: Distribution of IAMs' Organisations by Industry

Industry Categories	%
Manufacturing	27
Finance	19
Transport/Storage/Communications	15
Trading	10
Government bodies and statutory boards	8
Others (e.g., food and beverages, property, engineering, education)	21
Total	100



4.1.2 Organisational Size

In terms of size, the IAMs' organisations have a average (median) of 30,552 (1,250) full-time employees and average (median) total annual revenue, or turnover, of S\$7.4 billion (S\$700 million) in the last financial year. Table 4.2 and Table 4.3 show the distributions of the IAMs' organisations by number of full-time employees and by total annual revenue respectively. Compared to the 1996 study, the IAMs' organisations appear to be larger in size, with a significantly higher proportion of organisations having more than 5,000 full-time employees (i.e., 25%, compared to 6% in the 1996 study) and total annual revenue of above S\$1 billion (i.e., 25%, compared to 19% in the 1996 study).

Table 4.2: Distribution of IAMs' Organisations by Number of Full-time Employees

Number of Full-time Employees	%
200 and below	13
201 to 500	19
501 to 1,000	17
1,001 to 5,000	23
5,001 and above	25
No response	3
Total	100

Table 4.3: Distribution of IAMs' Organisations by Total Annual Revenue

Total Annual Revenue or Turnover in S\$ (Millions)	%
100 and below	19
101 to 500	13
501 to 1,000	15
1,001 and above	25
No response	28
Total	100

4.1.3 Listing status

Thirty-one percent of the IAMs' organisations are listed on the Singapore Exchange, while 35% are listed on a foreign stock exchange, mainly in the U.S. It is noteworthy that the foreign-listed companies are significantly larger in size both in terms of the number of full-time employees and total annual revenue (median of 5,500 and S\$2.4 billion respectively), compared to the SGX-listed companies (median of 900 and S\$692 million respectively) and the non-listed organisations (median of 1,000 and S\$735 million respectively).

4.2 Personal Profile of Internal Auditors

4.2.1 Job Titles

The most common job titles of IAMs are Head of Internal Audit (35%) and Internal Audit Manager (33%). Other titles include Director, Vice President and General Manager.

Among the IAS, 40% have the title of Assistant (or Deputy) Manager, Director or Vice President (and higher). Another 14% have the title of Principal or Senior Internal Auditor and Team Leader. This is consistent with our request for the IAMs to select the more senior IAS for the shorter survey.

4.2.2 Gender, Age and Formal Education

Table 4.4 presents some demographic information about the IAMs and IAS.

Table 4.4: Age, Gender and Formal Education

	IAM	IAS
Average age (years)	41	35
Gender – Female	44%	58%
Male	56%	42%
Highest level of formal education:		
- Doctoral degree	0%	0%
- Master degree/MBA	17%	17%
- Bachelor degree	60%	62%
- Diploma	4%	5%
- Others	19%	15%

Not surprisingly, the IAMs are generally older than the IAS, with an average age of 41 years for the IAMs compared to 35 years for the IAS. A slightly higher proportion of the IAMs is male (56%), while a slightly higher proportion of the IAS is female (58%). However, the difference in the gender distribution between the two groups is not statistically significant.

In terms of the highest level of formal education attained, 77% of the IAMs and 79% of the IAS have a bachelor or higher degree. Among those without a tertiary education, the majority (71%) have a professional qualification from the Association of Chartered Certified Accountants (ACCA).

The respondents are also asked to specify their field and institution of highest study. Among those who provided the relevant information, the majority (68% of the IAMs

and 69% of the IAS) are from Accountancy and the rest are mainly from business-related fields such as finance and information systems. In addition, the majority (60% of the IAMs and 58% of the IAS) are graduates from local tertiary institutions, with the highest proportion (58% of the IAMs and 72% of the IAS) graduating from Nanyang Technological University. This is in contrast to the finding of the 1996 study where the majority of the IAMs (60%) were graduates from overseas tertiary institutions.

4.2.3 Working Experience

Table 4.5 presents various measures of working experience of the IAMs and the IAS.

On average, the IAMs have 18.0 years of working experience, of which 6.6 years are spent in the current organisation and 5.4 years in the IAD. By comparison, the IAS has an average working experience of 11.3 years, of which 4.9 years are spent in the current organisation and 3.9 years in the IAD. These results suggest that the respondents have considerable experience with their current organisation and, more specifically, with their organisation's IAD.

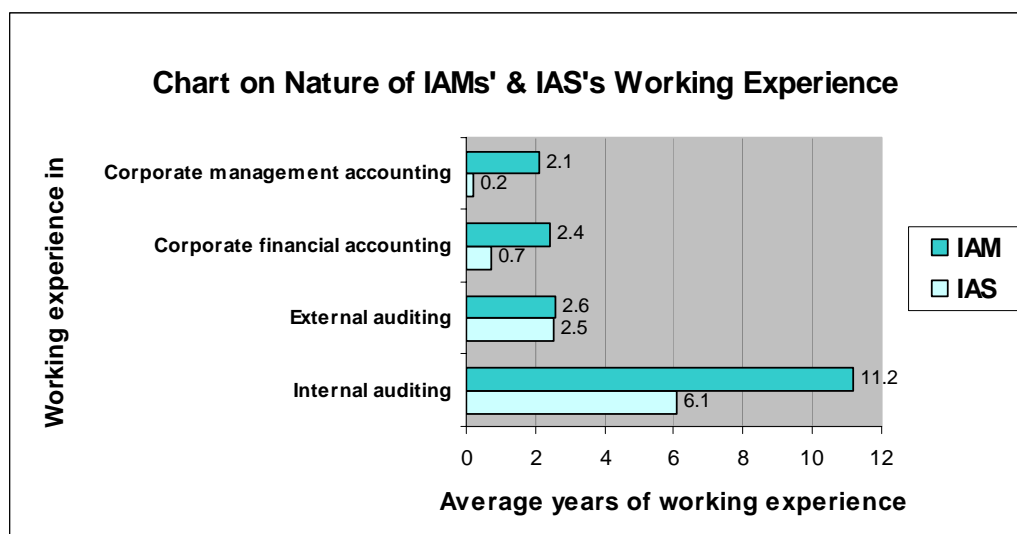
Table 4.5: Working Experience

	IAM	IAS
Average number of years of working experience	18.0	11.3
Average number of years in current organisation	6.6	4.9
Average number of years in organisation's IAD	5.4	3.9
Average number of years in current job title	4.6	3.6
Average numbers of years of working experience in:		
- Internal auditing	11.2	6.1
- External auditing (public accounting)	2.6	2.5
- Corporate financial accounting	2.4	0.7
- Corporate management accounting	2.1	0.2

In terms of IA experience, the IAMs have an average of 11.2 years, with 71% having more than five years, of IA experience. In contrast, the IAS has an average of 6.1 years, with 45% having more than five years, of IA experience. By comparison, 61% of the IAMs in the 1996 study had more than five years of IA experience.

In terms of external auditing (or public accounting) experience, both the IAMs and the IAS have comparable levels of experience (average of about 2.5 years), with 58% of the IAMs and 65% of the IAS having had some experience in external auditing. By comparison, 47% of the IAMs in the 1996 study had experience in public accounting. These results suggest that the public accounting profession continues to be a major source of supply of internal auditors.

In terms of accounting-related experience, the IAMs have slightly higher levels of corporate financial accounting and management accounting experience than the IAS, on average. However, only 31% and 27% of the IAMs (26% and 12% of the IAS) have had any experience in corporate financial accounting and management accounting respectively.

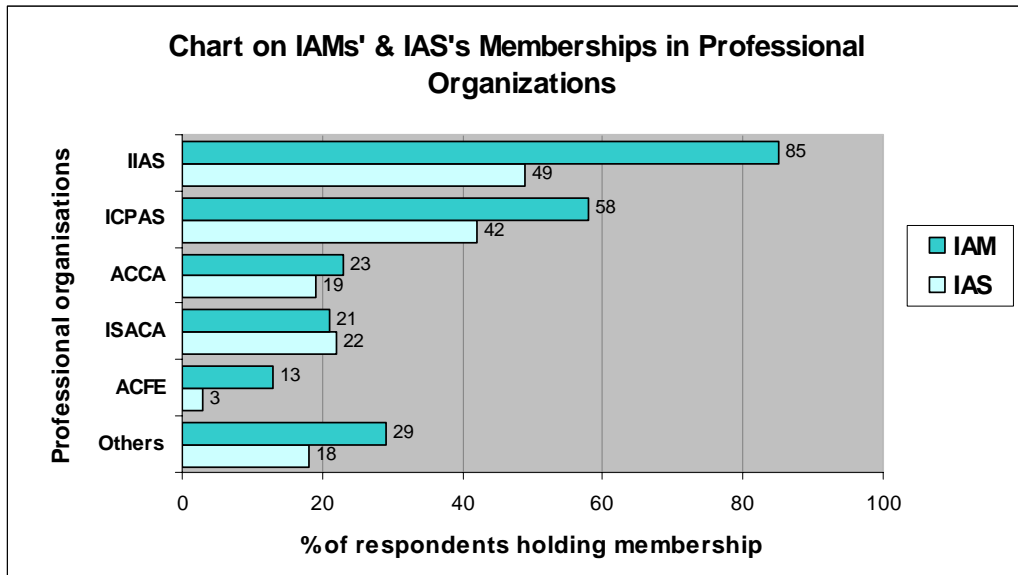


4.2.4 Professional Memberships and Qualifications

Table 4.6 presents the proportions of the IAMs and the IAS holding memberships in the various listed professional organisations.

Table 4.6: Professional Memberships

Professional Organisations	IAM %	IAS %
Institute of Internal Auditors Singapore (IIAS)	85	49
Institute of Certified Public Accountants of Singapore (ICPAS)	58	42
Association of Chartered Certified Accountants (ACCA)	23	19
Information Systems Audit and Control Associations (ISACA)	21	22
Association of Certified Fraud Examiners (ACFE)	13	3
Others	29	18



Eighty-five percent of the IAMs and 49% of the IAS are members of the IIAS. By comparison, 70% of the IAMs in the 1996 study were IIAS members. Among the companies listed on SGX, 73% of the IAMs and 38% of the IAS are IIAS members.

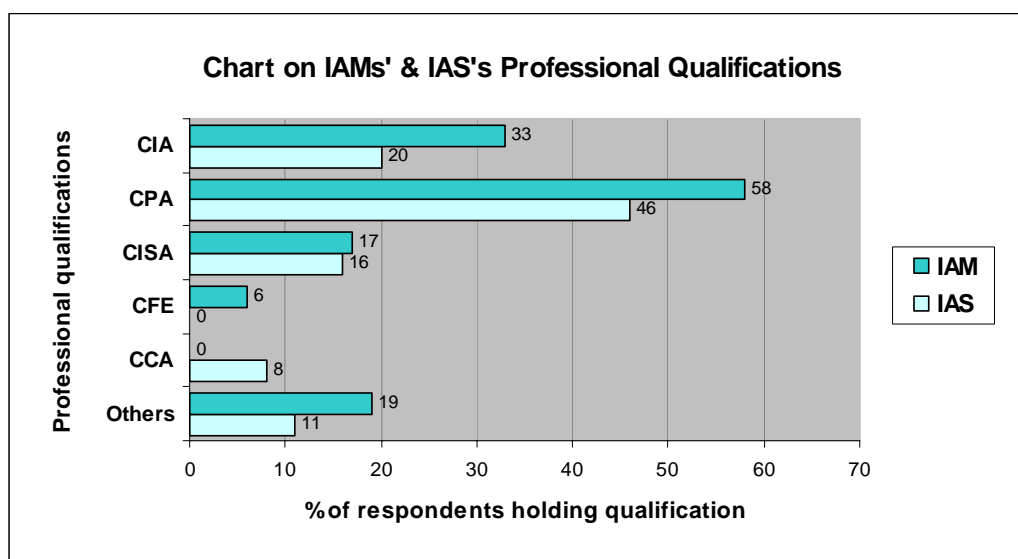
In terms of membership with professional accountancy organisations, 58% of the IAMs and 42% of the IAS are members with the Institute of Certified Public Accountants of Singapore (ICPAS). Another 23% of the IAMs and 19% of the IAS are members of the Association of Chartered Certified Accountants (ACCA) while 17% of the IAMs and 11% of the IAS are members of other professional accountancy organisations in Australia, New Zealand and Malaysia.

Given the rapid changes in information technology and growing concerns with corporate frauds, professional organisations such as the Information Systems Audit and Control Association (ISACA) and the Association of Certified Fraud Examiners (ACFE) are likely to play an increasingly important role within the IA profession. It is interesting to note that 21% of the IAMs and 22% of the IAS hold an ISACA membership, while only 13% of the IAMs and 3% of the IAS hold an ACFE membership.

Table 4.7 presents the proportions of the IAMs and the IAS holding the various listed professional qualifications certified by the relevant professional organisations.

Table 4.7: Professional Qualifications

Professional Qualifications	IAM %	IAS %
Certified Internal Auditor (CIA)	33	20
Certified Public Accountant (CPA)	58	46
Certified Information Systems Auditor (CISA)	17	16
Certified Fraud Examiner (CFE)	6	0
Chartered Certified Accountant (CCA)	0	8
Others	19	11



Thirty-three percent of the IAMs and 20% of the IAS hold the Certified Internal Auditor (CIA) qualification, compared to only 2% of the IAMs in the 1996 study. The majority of the IAMs (58%) and 46% of the IAS hold the Certified Public Accountant (CPA) qualification, while a smaller proportion holds the Certified Information Systems Auditor (CISA) or the Certified Fraud Examiner (CFE) qualifications.

In sum, it is noteworthy that the IA profession is largely made up of qualified professionals, with all the IAMs and 86% of the IAS holding membership in one or more professional organisations, and 79% of the IAMs and 68% of the IAS holding one or more professional qualifications in accounting and auditing-related fields.

4.2.5 Compensation

Table 4.8 presents the distribution of the IAMs and IAS across different bands of total annual compensation (inclusive of bonuses and benefits). Sixty-five percent of the IAMs and 20% of the IAS earn above S\$100,000. This compares favourably with the finding of the 1996 study that only 43% of the IAMs earned above S\$100,000.

Table 4.8: Total Annual Compensation

Dollar bands	IAM %	IAS %
S\$50,000 and below	0	29
Between S\$50,001 and S\$75,000	24	34
Between S\$75,001 and S\$100,000	11	17
Between S\$100,001 and S\$150,000	23	15
Between S\$150,001 and S\$200,000	23	2
Between S\$200,001 and S\$250,000	15	1
Between S\$250,001 and S\$300,000	2	2
S\$300,001 and above	2	0
Total	100	100

The compensation levels of both the IAMs and the IAS are positively related to their years of working experience, but not associated with their gender or years of experience in the current organisation or IAD. Further analyses indicate that the IAMs' compensation is positively associated with their years of IA experience, but not with their years of external auditing experience. Specifically, the IAMs earning above S\$100,000 have an average of 13.9 years of IA experience, compared to an average of 6.2 years for those earning S\$100,000 and below. In contrast, the IAS's compensation is positively associated with both their years of IA and external auditing experience, with those earnings above S\$100,000 having an average of 9.1 years of IA experience and 4.6 years of external auditing experience, compared to an average of 5.3 years of IA experience and 1.9 years of external auditing experience for those earning S\$100,000 and below.

In terms of the linkage between internal auditors' compensation and organisational performance, 56% of the IAMs and 46% of the IAS receive incentive compensation based on their organisation's financial performance (such as earnings), while 13% of the IAMs and 12% of the IAS receive incentive compensation based on their organisation's share price. In addition, 25% of the IAMs and 19% of the IAS own shares in their organisation where the organisation is a listed company.

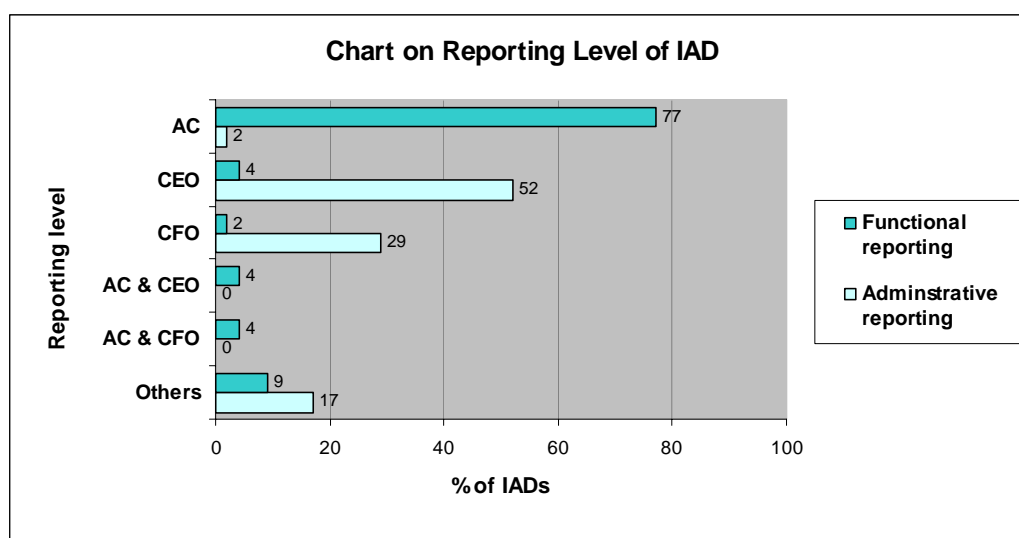
4.3 Profile and Practices of Internal Audit Departments (IADs)

4.3.1 Level of Reporting

Table 4.9 presents the proportions of IADs reporting to the various listed organisation levels, both functionally and administratively. The majority of the IADs (77%) report functionally to the AC while only 6% report functionally to either the CEO or the CFO. Interestingly, 8% of the IADs report functionally to the AC as well as either the CEO or the CFO. In contrast, the majority of the IADs report administratively to the CEO (52%) or CFO (29%). Among the IADs of companies listed on the Singapore Exchange, all of them report functionally to the AC while 67% and 20% report administratively to the CEO and the CFO respectively.

Table 4.9: Level of IAD Reporting

Reporting Level	Functional %	Administrative %
Audit Committee (AC)	77	2
Chief Executive Officer (CEO)	4	52
Chief Financial Officer (CFO)	2	29
AC and CEO	4	0
AC and CFO	4	0
Others	9	17
Total	100	100



4.3.2 Internal Audit Staffing

Tables 4.10 and 4.11 present the distributions of the IADs by total number of IA personnel and by number of IT audit specialists respectively. The average number of IA personnel and IT audit specialists are 9.8 and 1.1 respectively. The majority (59%) of the IADs have five or fewer IA staff. Additionally, only 38% of the IADs have one or more IT audit specialists. These results are quite similar to the findings of the 1996 study that 69% of IADs had five or fewer IA staff and only 39% had one or more IT audit specialists. It appears that the size of IADs and employment of IT audit specialists in IADs have not increased significantly over the past decade.

In terms of professional qualifications, 52% of the IADs have one or more IA staff with the CIA qualification, while 40% of the IADs have one or more IA staff with the CISA qualification. In terms of growth in IA staff strength in the near future, only 29% of the IADs indicate that there will likely be an overall increase in the staff number over the next 12 month. Lastly, in terms of travelling requirements, an average of 25% of the IADs' personnel time is spent overseas, with only 23% of the IADs conducting their IA activities wholly in Singapore.

Table 4.10: Distribution of IADs by Number of IA Staff

Number of IA Staff	%
Between 1 and 2	14
Between 3 and 5	45
Between 6 and 10	24
11 and above	17
Total	100

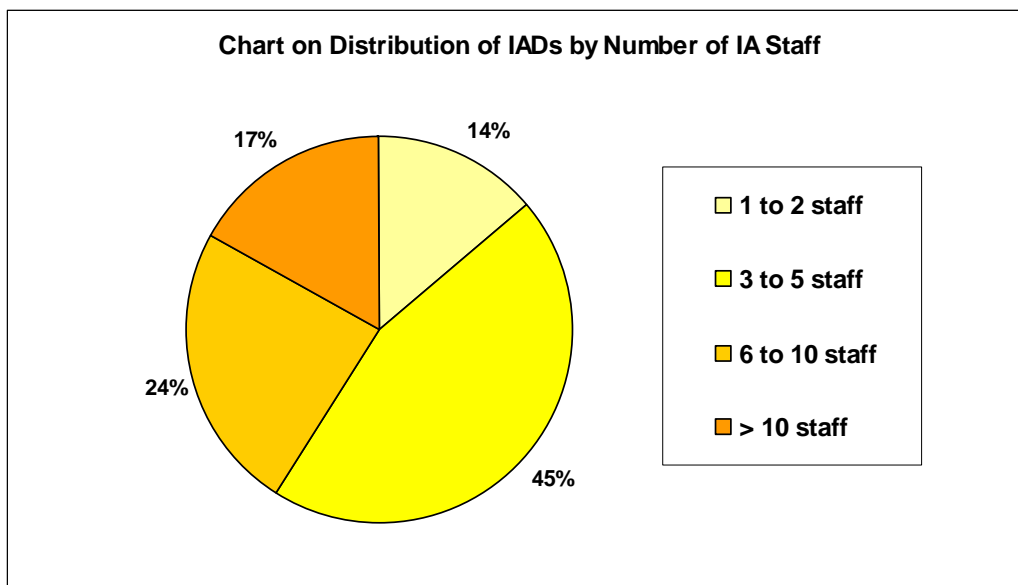
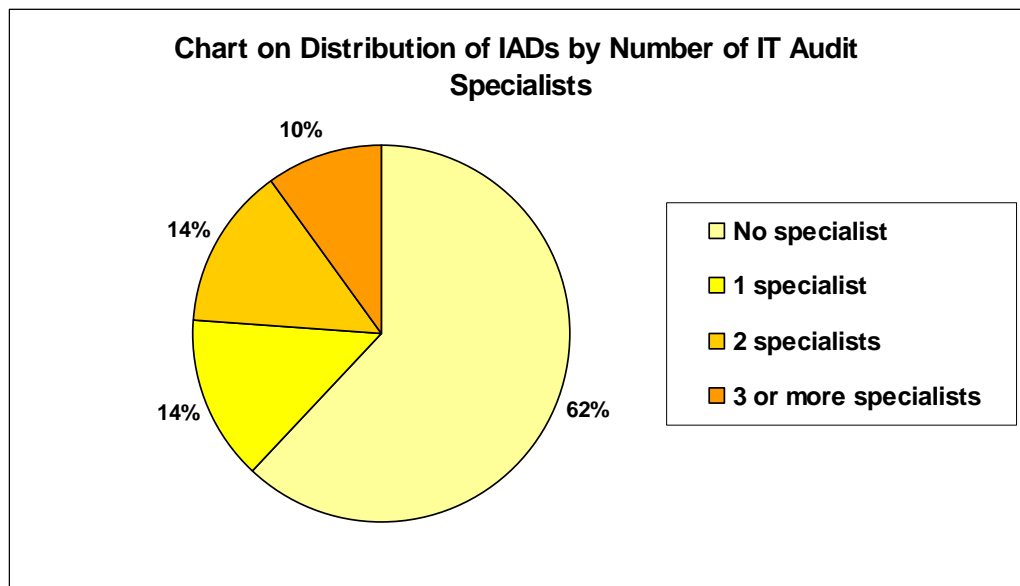


Table 4.11: Distribution of IADs by Number of IT Audit Specialists

Number of IT Audit Specialists	%
0	62
1	14
2	14
3 and above	10
Total	100



4.3.3 Internal Audit Budgets

The IADs have an average budgeted expenditure of S\$954,000 in the last financial year, based on responses from 28 IAMs. The other IAMs did not provide budget-related information, presumably due to confidentiality concerns.

Seventy-four percent of the budgeted expenditure are allocated to manpower cost, 4% to training, and the remaining 22% to other costs such as travel, outsourcing fees and administrative overheads.

4.3.4 Outsourcing of Internal Audit Activities

Thirty-one percent of the IAMs indicate that a proportion (ranging from 1% to 90%, with an average of 24%) of their organisation's IA activities is currently outsourced, predominantly to a CPA firm other than the incumbent external auditors (93%).

4.3.5 Existence and Coverage of Audit Charter

The International Standards for the Professional Practice of Internal Auditing issued by the IIA advocate the use of a charter that formally defines the purpose, authority and responsibility of the IA function.

Eighty-one percent of the IAMs indicate that their IADs have an audit charter. This proportion is comparable to the 77% in the 1996 study. The IAMs' membership with the IIA is positively associated with the likelihood of the IAD having a charter. Specifically, 90% of the IADs have a charter when their IAMs are IIA members, compared to only 29% when their IAMs are not IIA members.

Table 4.12 presents the proportions of charters covering the various listed areas. The most commonly covered areas include access to company documentation, scope of IA coverage, independence from activities audited, and reporting lines. In contrast, quality assurance, audit methodology and relationship with external auditors are relatively less frequently covered.

Table 4.12: Coverage of Audit Charter

Areas Covered	%
Access to company documentation	97
Scope of IA coverage	95
Reporting lines	92
Independence from activities audited	92
Relationship with the AC	74
Quality assurance	51
Audit methodology	49
Relationship with external auditors	41
Others	3

4.3.6 Role of IADs

According to the IIA, internal auditing is “an independent, objective assurance and consulting activity designed to add value and improve an organisation’s operations.” An assurance role refers to one where internal auditors provide an objective examination of evidence for the purpose of providing an independent assessment on risk management, control, or governance processes for the organisation. Examples of assurance roles include financial, performance, compliance, systems security and due diligence engagements. In contrast, a consulting role refers to one where internal auditors undertake advisory and related client activities, the nature and scope of which are agreed with the client and which are intended to add value and improve an organisation’s governance, risk management, and control processes without the internal auditors assuming management responsibility. Some examples of consulting roles include counsel, advice, facilitation and training.

To provide some insight into the extent to which IAMs consider their organisation's IAD as playing a consulting (vs. an assurance) role, IAMs rated their IAD along a scale of 0 (purely assurance) to 10 (purely consulting). The IAMs' average rating is 4.6, which is not statistically different from the mid-point of 5. This suggests that the IAMs consider their IADs to play both assurance and consulting roles, consistent with IIA's definition of internal auditing.

4.3.7 Services Provided by IADs

Table 4.13 shows the proportions of the IADs providing the various listed services.

Table 4.13: Services Provided by IADs

Services Provided	%
1. Design information and internal control systems	19
2. Implement information and internal control systems	19
3. Appraise information and internal control systems	94
4. Appraise the reliability of financial reporting information	65
5. Appraise reliability of operational information	73
6. Appraise compliance with internal policies and regulations	100
7. Appraise compliance with external policies and regulations	83
8. Appraise the safeguarding of organisational assets	98
9. Appraise the deployment and usage of organisational resource	52
10. Appraise the economy, efficiency and effectiveness of operations	77
11. Assess the likelihood of fraud in the organisation's operations	63
12. Detect the occurrence of fraud in the organisation's operations	44
13. Investigate any detected fraud	79
14. Provide internal consultation to the organisation's management	83
15. Provide support and assistance to the organisation's external auditors	44
16. Provide support and assistance to the organisation's AC	90
17. Provide support and assistance to the organisation's Board of Directors	44
18. Appraise the achievement of the organisation's strategic objectives	23
19. Appraise the achievement of the organisation's operational objectives	60
20. Appraise the robustness of the organisation's risk management system	56
21. Appraise the governance leadership, structures and processes	52
22. Review IT and information security of the organisation	79
23. Review data privacy issues and protection mechanisms	46

On average, the IADs perform 14 out of the 23 services identified in Table 4.13. Almost all of the IADs provide traditional services such as appraising information and internal control systems (94%), safeguarding of organisational assets (98%), and compliance with internal (100%) and external (83%) policies and regulations. A

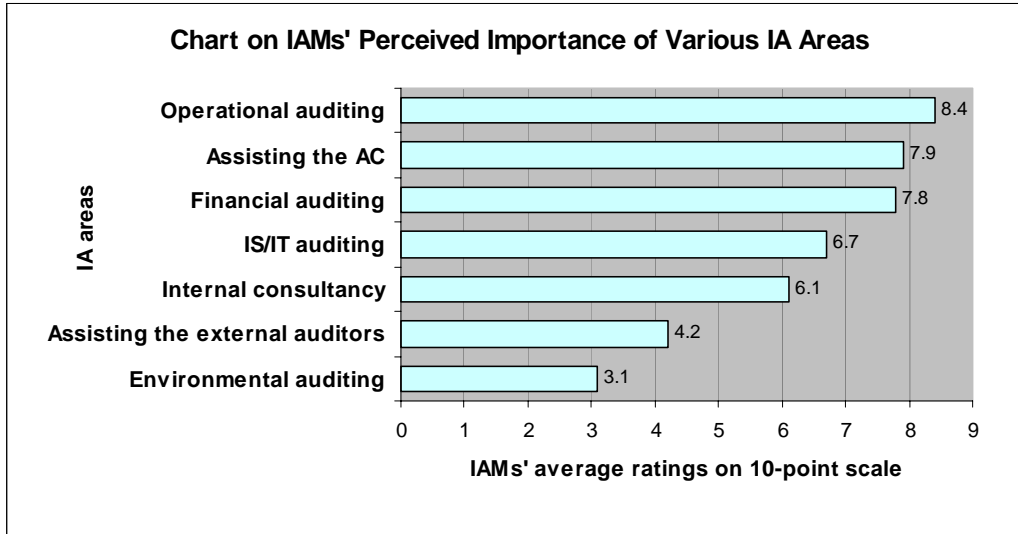
significant proportion of the IADs also perform information security reviews (79%), appraisal of the reliability of operational and financial reporting information (73% and 65% respectively), operational auditing that appraises the economy, efficiency and effectiveness of the organisation's operations (77%), as well as provide support and assistance to the AC (90%) and internal consultation to management (83%). In contrast, only a minority of the IADs are involved in designing or implementing information and internal control systems (19%), and in appraising the achievement of the organisation's strategic objectives (23%). A majority of the IADs are involved in appraising the achievement of the organisation's operational objectives (60%) and in appraising the robustness of the organisation's risk management system (56%). With regards to fraud-related functions, the IADs are more involved with assessment of fraud likelihood (63%) and fraud investigation (79%) than with fraud detection (44%).

Table 4.14 presents the IAMs' ratings of the importance of the various listed areas in terms of the time and resources devoted by their IAD, on a scale of 0 (not at all important) to 10 (extremely important). The ratings suggest that the IAMs consider operational auditing and financial auditing to be significantly more important than information systems/technology (IS/IT) auditing, internal consultancy or environmental auditing. These results are consistent with the findings of the 1996 study where the IAMs reported spending the highest proportion of time on operational auditing, followed by financial auditing and IS auditing.

In terms of providing assistance to the AC and the external auditors, the IAMs rate the former as more important than the latter. Not surprisingly though, the IAMs' importance ratings on assisting the external auditors are higher when the IAD is involved in providing support and assistance to the external auditors (average rating of 6.0) than otherwise (average rating of 2.9). Similarly, the IAMs' importance rating of financial auditing is somewhat higher when the IAD is involved in providing support and assistance to the external auditors (average rating of 8.3) than otherwise (average rating of 7.4).

Table 4.14: IAMs' Perceived Importance of Various IA Areas

Areas	Average rating
Operational auditing	8.4
Financial auditing	7.8
IS/IT auditing	6.7
Internal consultancy	6.1
Environmental auditing	3.1
Assisting the AC	7.9
Assisting the external auditors	4.2



4.3.8 Audit Methodologies and Tools

Table 4.15 shows the proportions of IAMs who indicate that their IAD uses the various listed audit methodologies and tools in the conduct of internal audits. A risk-based audit approach and detailed audit programs are the most widely used, while pre-established performance targets and electronic working papers are amongst the least used tools. The use of time budgets and schedules appears to have declined somewhat from 86% in 1996 to 60% in the current study, and only 38% of the IADs use time sheets for monitoring purposes.

Table 4.15: Audit Methodologies and Tools Used by IADs

Audit Methodologies and Tools	%
Risk-based audit approach	90
Detailed audit programs	77
Time budgets and schedules	60
Control self-assessment approach	40
Time sheets (for tracking time spent on different areas)	38
Statistical sampling method(s)	38
Electronic audit working papers	33
Pre-established performance targets	25

Use of Computer-Assisted Audit Techniques (CAATs)

Sixty-three percent of the IAMs indicate that their IADs use one or more computer-assisted audit techniques. The majority of these IADs (73%) use generalized audit software (such as ACL), but only 20% of them use test data, 7% use integrated test facility, 7% use specialized audit software, and none uses code comparisons.

Use of Internal Control Frameworks

Sixty-five percent of the IAMs' organisations use one or more internal control frameworks for the implementation, review and monitoring of internal controls. Of these, 84% use the Committee of Sponsoring Organisations of the Treadway Commission (COSO) Internal Control Integrated Framework, 23% use the COSO Enterprise-wide Risk Management (ERM) Integrated Framework, and 45% use the COBIT IT Governance Framework. Fifty-eight percent of these IAMs also indicate that their organisation integrates various internal control frameworks to provide a holistic and integrated enterprise-wide review of the adequacy and effectiveness of internal controls.

Use of Professional Internal Auditing Standards

Seventy-nine percent of the IAMs indicate that their IADs follow the Standards for the Professional Practice of Internal Auditing issued by the IIA for their IA work. This is higher than the 53% found in the 1996 study, probably due to the higher proportion of IAMs (85%) who are IIAS members and are, therefore, more likely to follow the Standards. Indeed, 88% of the IAMs who are IIAS members indicate that their IADs follow the Standards, compared to only 29% of the IAMs who are not IIAS members. The main reasons for not following the Standards are the organisation's use of in-house developed standards and not being aware of the Standards.

4.3.9 Quality Assessments

The IIA strongly advocates that IADs undergo periodic internal quality assessments (QA) and an external QA once every five years by a qualified independent reviewer or review team from outside the organisation. Thirty-one percent of the IAMs indicate that their IADs have undergone an internal QA in the past five years. However, only 13% indicate that their IADs have undergone an external QA in the past five years, although another 35% indicate that they are either in the process of undergoing one, or will do so in the near future. Among the IAMs whose IADs have neither undergone any external QA in the past five years nor indicated that they will be doing so in the near future, 44% cite the lack of perceived benefits as a main reason, while 36% cite excessive cost involved and 32% cite lack of organisational support. Among other reasons given are no mandatory requirement and confidentiality or security concerns.

The IIA requires members whose IADs are in existence since January 1, 2002 to have an external QA by January 1, 2007. Forty-seven percent of the IAMs indicate that an external QA will be conducted by the end of December 2006 and thereafter once every five years.

To provide some insight into the level of support among the IAMs for an external QA, we ask the IAMs the extent to which they agree that the IAD should periodically undergo an external QA on a scale of 0 (strongly disagree) to 10 (strongly agree). The IAMs' average rating is 6.6, suggesting that they moderately agree with the need for

periodic external QA. Still, many of the IAMs (42%) are either indifferent or opposed to the need for an external QA.

We also ask the IAMs to indicate how frequently they believe an external QA of the IAD should be conducted. Of those who responded (94%), the majority (58%) indicate that it should be conducted once every five years, which is consistent with IIA's recommendation. Another 33% of the IAMs indicate that it should be conducted more frequently (mostly once every two or three years).

4.3.10 Training and Development

For the current study, the proportions of IADs providing formal outside training programs, formal in-house training programs and on-the-job training are 85%, 52% and 85% respectively, compared to 60%, 26% and 87% respectively for the 1996 study. Thus, while on-the-job training continues to be an important mode of training for IA staff, the IADs have increasingly emphasized more formal forms of training for their IA staff over the past decade. Note that 44% of the IADs provide all three forms of training, while 17% provide only one form of training, with equal proportions for formal training programs and on-the-job training.

Table 4.16 reports the proportions of the IAMs' organisations that provide support (in terms of time and money) to their IA staff for participating in various listed professional development activities, both for the current study and for the 1996 study. Compared to the findings in the 1996 study, the level of support for each activity has increased by between 8 and 26 percentage points, an encouraging sign for internal auditors who need to constantly keep abreast with developments in their field.

Table 4.16: Support of IAMs' Organisations for Professional Development Activities

Activities Supported	Current study	1996 study
	%	%
External seminars and conferences (1 to 5 days)	98	90
Lunch and evening talks or courses	67	43
Professional roundtables (½ to 1 day)	54	30
External courses leading to formal qualifications such as the CIA qualification	52	26
Involvement in professional organisations	35	23
Distant learning packages	21	6

4.4 Audit Committees' Role and Interactions with the IAD

4.4.1 Existence and Composition of Audit Committees in IAMs' Organisations

An AC exists in 88% of the IAMs' organisations. Of the six organisations without an AC, three are non-listed organisations, while the remaining three are listed on a foreign stock exchange.

In terms of composition, the ACs have as few as three members and as many as 15 members with an average of 4.2 AC members. Ninety-two percent of the ACs have between 3 and 5 members. On average, 87% of the AC members are non-executive directors, while 78% of the AC members are independent directors and 51% have financial expertise.¹ Seventy-six percent of the ACs comprise entirely non-executive members, while 53% (88%) of the ACs have all (a majority of) members who are independent directors. All except one AC have at least one member with financial expertise, while 62% of the ACs have two or more members with financial expertise.

According to the recommendations of the Singapore Code of Corporate Governance 2005, an AC should comprise at least three directors, all non-executive, the majority of whom should be independent. Further, at least two members should have accounting or related financial management expertise or experience. Amongst the IAMs' companies listed on the Singapore Exchange, all of their ACs have at least 3 members with a majority of the AC members being independent directors. However, only 73% of the listed companies have only non-executive directors as AC members, and only 47% have at least two AC members with financial expertise. A further 47% of the listed companies have only one AC member with financial expertise. Only a third of the listed companies' ACs meets all of the above recommendations of the Code, due largely to the lack of sufficient members with financial expertise.

4.4.2 Internal Audit-Related Functions Performed by Audit Committees

Table 4.17 presents the proportions of the ACs performing the various listed IA-related functions. Reviewing major IA findings and recommendations and their follow-up by management, as well as reviewing and approving IA plans, are the most common IA-related functions performed by the ACs. However, reviewing and approving IA budgets and staffing matters, as well as determining internal auditors' involvement in the external audit, are not performed by the majority of the ACs. Other functions performed by the ACs, as cited by the IAMs, include approving the IA charter and whistle-blowing program, and conducting year-end appraisals.

¹ An independent director is defined as one who has no relationship with the company, its related companies or its officers that could interfere or be reasonably perceived to interfere with the exercise of the director's independent business judgment with a view to the best interest of the company. A director with financial expertise is defined as one who has accounting or related financial management expertise or experience (CCDG 2005).

Table 4.17: Internal Audit-Related Functions Performed by Audit Committees

Functions Performed	%
Review IA findings and recommendations	88
Approve IA plans	79
Review IA plans	76
Review management's follow-up of IA findings and recommendations	76
Review IA staffing matters	43
Approve IA staffing matters	36
Approve IA budgets	33
Review IA budgets	26
Determine internal auditors' involvement in the external audit	14
Others	5

4.4.3 Audit Committees' Meetings with Internal Auditors

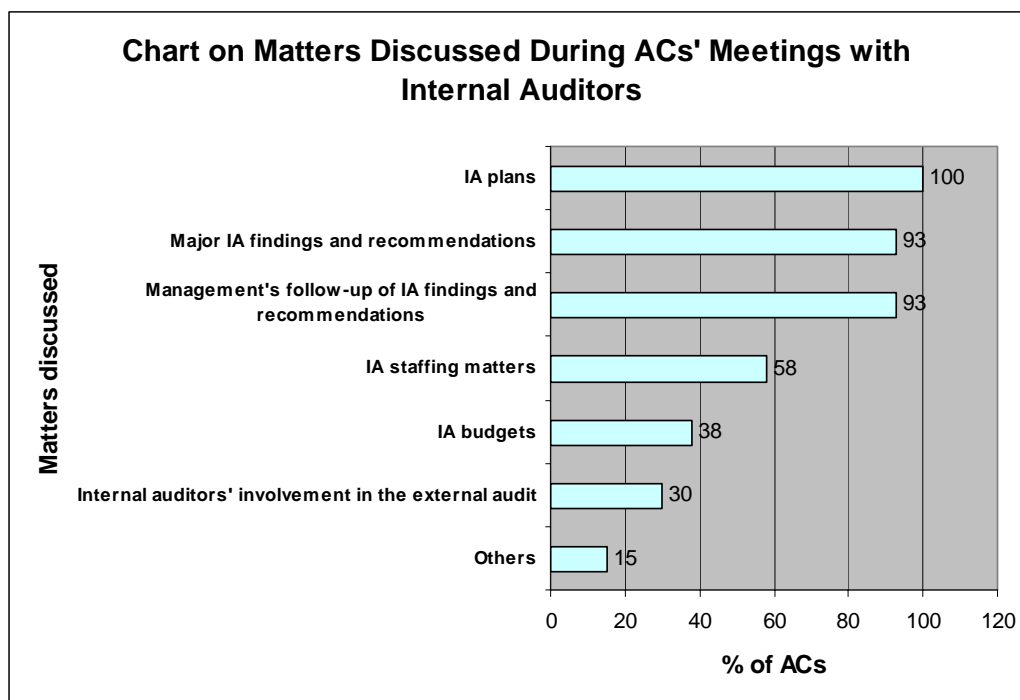
On average, the ACs of the IAMs' organisations held five meetings with internal auditors in the last financial year, four of which were held in the presence of management. Eighty-five percent of the ACs met with the internal auditors at least four times, but only 65% of the ACs met with the internal auditors without the presence of management at least once, in the last financial year.

The Singapore Code of Corporate Governance 2005 recommends that the AC meets with the internal auditors, without the presence of management, at least once annually. Amongst the IAMs' companies that are listed on the Singapore Exchange, all the companies' ACs met with the internal auditors at least four times in the last financial year but only 60% of the ACs meet the Code's recommendation of meeting the internal auditors at least once without the presence of management.

Table 4.18 presents the proportions of the IAMs whose organisation's AC discussed the various listed matters during its meetings with the internal auditors. The most commonly discussed matters are the IA plans, major IA findings and recommendations, and management's follow-up of IA findings and recommendations. Much less commonly discussed are the IA budgets and internal auditors' involvement in the external audit. Other matters discussed with the AC, as cited by the IAMs, include the IAD's training and development program, risk assessments, external audit plans, and issues related to quality assessments, whistle-blowing and the Sarbanes-Oxley Act.

Table 4.18: Matters Discussed During ACs' Meetings with Internal Auditors

Matters Discussed	%
IA plans	100
Major IA findings and recommendations	93
Management's follow-up of IA findings and recommendations	93
IA staffing matters	58
IA budgets	38
Internal auditors' involvement in the external audit	30
Others	15

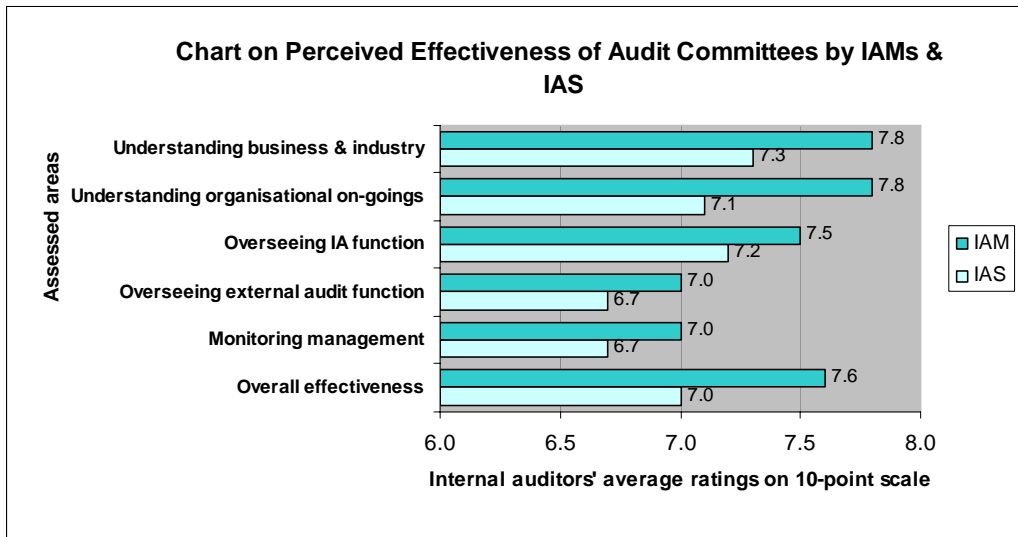


4.4.4. IAMs' and IAS' Perceptions of Audit Committees' Effectiveness

To provide some insight into the effectiveness of ACs in discharging their various IA-related functions, as perceived by internal auditors, both the IAMs and the IAS are asked to rate the effectiveness of their organisations' AC on a scale of 0 (not at all effective) to 10 (extremely effective). Table 4.19 presents the average ratings of the IAMs and the IAS of their organisation's AC's effectiveness. Overall, the ACs are perceived by both the IAMs and IAS to be quite effective in all areas. Although the IAMs' average ratings are slightly higher than those of the IAS, none of the differences is statistically significant, except for ACs' understanding of the on-goings in the organisation. Generally, both the IAMs and the IAS perceive the ACs to be more effective in understanding their organisations' business, industry and on-goings as well as overseeing the IA function than in overseeing the external audit function and monitoring the management.

Table 4.19: Perceived Effectiveness of Audit Committees by IAMs and IAS

Areas	Average rating of	
	IAM	IAS
Understanding the business and industry	7.8	7.3
Understanding the on-goings in the organisation	7.8	7.1
Overseeing the IA function	7.5	7.2
Overseeing the external audit function	7.0	6.7
Monitoring management	7.0	6.7
Overall effectiveness	7.6	7.0



4.5 External Auditors' Role and Interactions with the IAD

4.5.1 IAD's Involvement in the External Audit

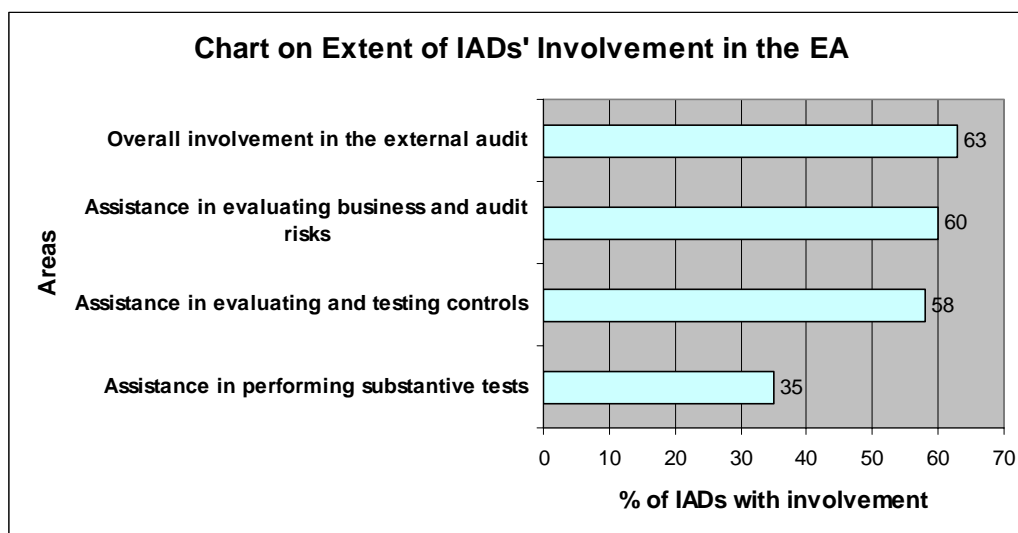
Eighty-five percent of the IAMs work in organisations whose external auditors are from one of the Big Four public accounting firms.²

The IAMs rated the extent of their IAD's involvement in the external audit in the various areas shown in Table 4.20, on a scale of 0 (not at all involved) to 10 (highly involved). The average ratings are generally quite low. Table 4.20 also shows the proportions of the IADs that are involved in the various areas (i.e., where an IAD's extent of involvement is rated above zero). The majority of the IADs are involved in assisting the external auditors in evaluating the business and audit risks and in evaluating and testing controls.

Table 4.20: Extent of IADs' Involvement in the External Audit

Areas	Average involvement rating	Involvement % *
Overall involvement in the external audit	3.1	63
Assistance in evaluating business and audit risks	3.2	60
Assistance in evaluating and testing controls	3.4	58
Assistance in performing substantive tests	2.8	35

* Denotes proportion of the IAMs who rate IAD's involvement in the area above 0 (not at all involved).



² The "Big Four" firms are Deloitte & Touche, Ernst & Young, KPMG and PricewaterhouseCoopers.

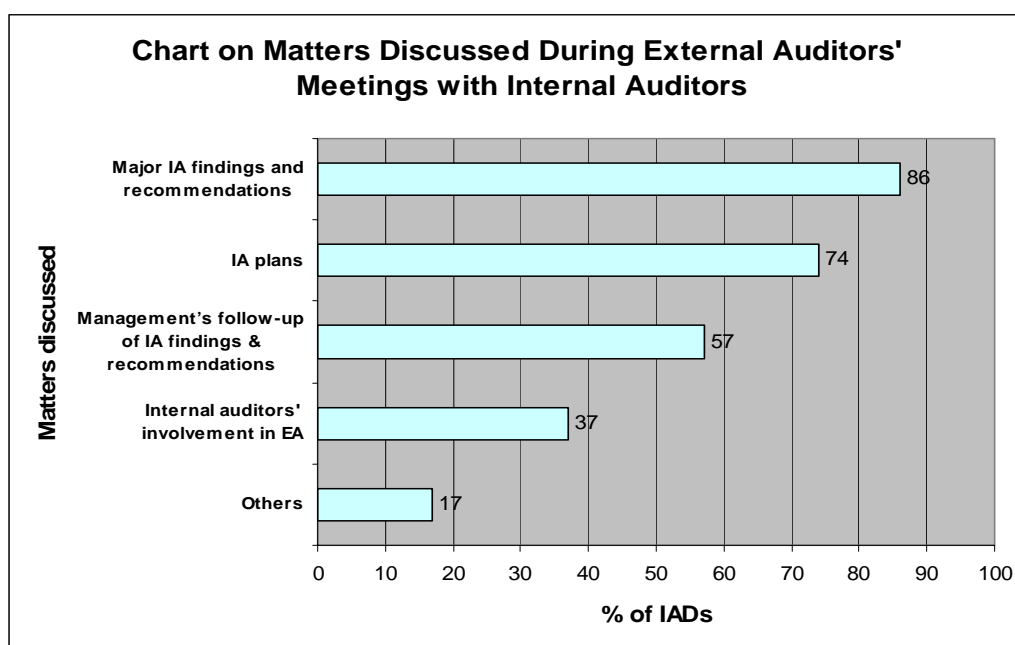
4.5.2 External Auditors' Meetings with Internal Auditors

On average, two meetings were held by the external auditors with the internal auditors in the past financial year. Sixty-nine percent of the IAMs indicate that at least one such meeting is held.

Table 4.21 presents the proportions of the IAMs whose organisation's external auditors discussed the various listed matters during their meetings with the internal auditors. Similar to the AC meetings with internal auditors, major IA findings and recommendations and IA plans are the most commonly discussed matters with the external auditors, while internal auditors' involvement in the external audit is the least commonly discussed. However, management's follow-up of IA findings and recommendations are less frequently discussed with the external auditors than with the audit committee. Other matters discussed during the meetings include the external auditors' audit plan and findings, fraud risk, ways to reduce audit fees, and compliance with the Sarbanes-Oxley Act.

Table 4.21: Matters Discussed During External Auditors' Meetings with Internal Auditors

Matters Discussed	%
Major IA findings and recommendations	86
IA plans	74
Management's follow-up of IA findings and recommendations	57
Internal auditors' involvement in the external audit	37
Others	17



4.5.3 IAM's Perceived Outcomes of their Interactions with External Auditors

We ask the IAMs to rate the extent to which they agree that their interactions with the external auditors have resulted in the various outcomes listed in Table 4.22, on scale of 0 (strongly disagree) to 10 (strongly agree). The IAMs' average agreement ratings are presented in Table 4.22.

Table 4.22: IAMs' Perceptions of the Outcomes of Their Interactions with the External Auditors

Outcomes	Average rating
Better communication to help resolve issues	6.2
Improvement in the organisation's operations	5.7
Greater recognition of IA by management	5.1
Improvement in the quality of IA work	5.1
Reduction in the external audit fee	4.1

On average, the IAMs agree that their interactions with the external auditors have resulted in better communication to help resolve issues and improvement in the organisation's operations. They are somewhat neutral about whether the interactions have resulted in greater recognition of IA by management or an improvement in the quality of IA work. In addition, they do not agree that the interactions have resulted in a reduction of the external audit fee.

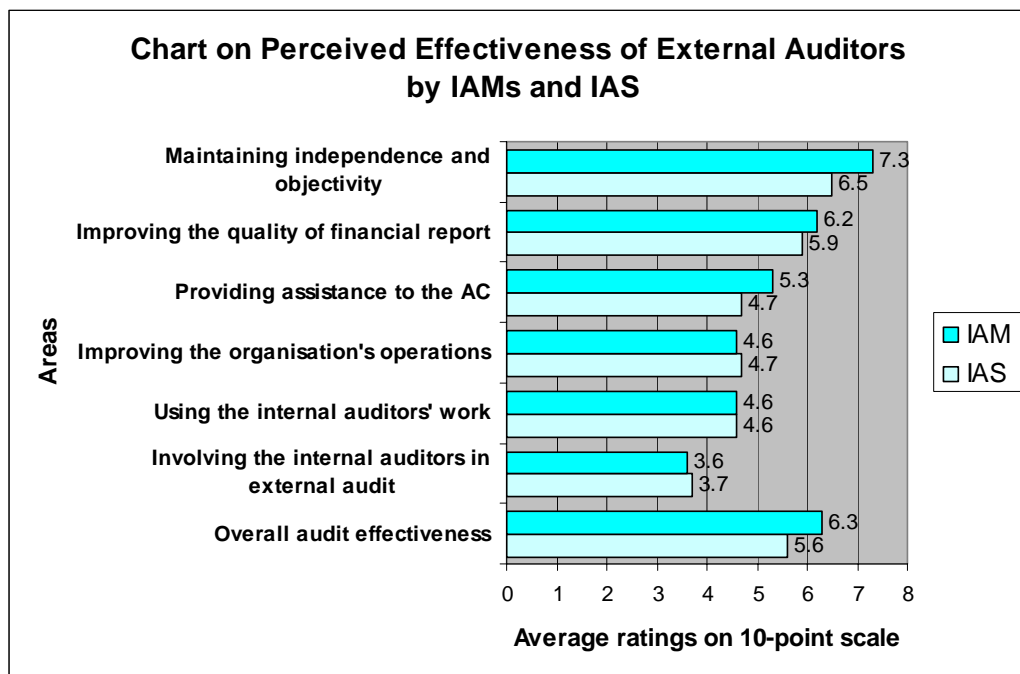
Interestingly, the IAMs' perceptions of the outcomes of their interactions with the external auditors are associated in some ways to the extent of their IAD's involvement in the external audit. Specifically, when the IAD is more involved in assisting the external auditors in evaluating business and audit risks, the IAMs are more likely to perceive that their interactions with the external auditors have resulted in better communication to help resolve issues, improvement in the organisation's operations, and improvement in the quality of IA work. These results suggest that increased involvement of internal auditors in the external audit process (particularly in assisting the external auditors in evaluating business and audit risks) leads to greater perceived benefits for both the IAD and the organisation.

4.5.4 IAMs' and IAS's Perceptions of External Auditors' Effectiveness

To provide some insight on the effectiveness of the external auditors, as perceived by internal auditors, both the IAMs and IAS are asked to rate the effectiveness of their organisations' external auditors on a scale of 0 (not at all effective) to 10 (extremely effective). Table 4.23 presents the IAMs' and the IAS's average effectiveness ratings.

Table 4.23: Perceived Effectiveness of External Auditors by IAMs and IAS

Areas	Average rating of	
	IAM	IAS
Maintaining independence and objectivity	7.3	6.5
Improving the quality of financial report	6.2	5.9
Providing assistance to the AC	5.3	4.7
Improving the organisation's operations	4.6	4.7
Using the internal auditors' work	4.6	4.6
Involving the internal auditors in external audit	3.6	3.7
Overall audit effectiveness	6.3	5.6



Both the IAMs and IAS perceive the external auditors to be quite effective in maintaining independence and objectivity and in improving the quality of financial report. However, they also perceive the external auditors to be relatively less effective in involving the internal auditors in the external audit, using the internal auditors' work, and improving the organisation's operations. The effectiveness ratings by the IAMs and the IAS appear to be positively associated with the IAD's level of involvement in the external audit. This could be due to an increase in familiarity with the external auditors as involvement in the external audit increases. The differences in ratings between the IAMs and the IAS are not statistically significant except for "providing assistance to the AC" and "maintaining independence and objectivity" where the IAMs' ratings are higher than the IAS's ratings.

4.6 Trends, Practices and Other Perspectives Relating to Outsourced (vs. In-House) Internal Audit Functions

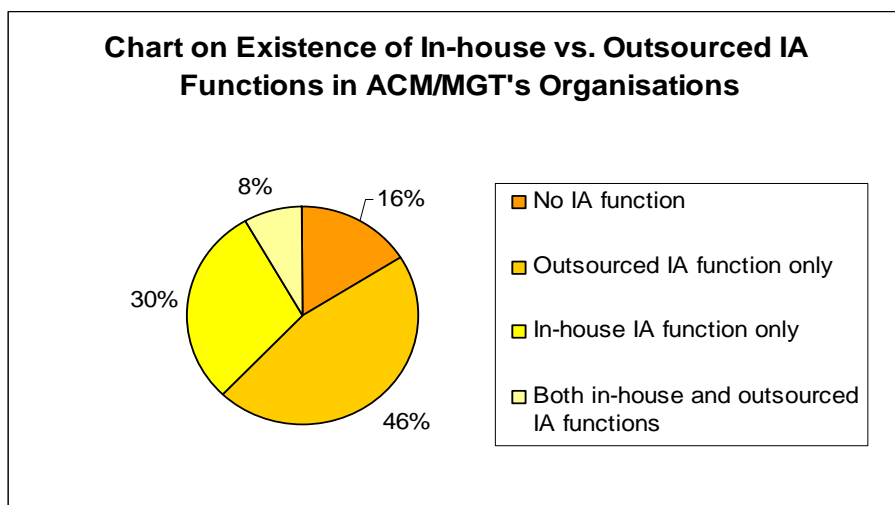
In this section, we provide some evidence on the trends, practices and other perspectives relating to outsourced (vs. in-house) IA functions. The findings are based on responses from the ACM and MGT respondents given that the IAMs' responses are only applicable to in-house IA functions. Only aggregated results are reported as there are no statistically significant differences between the ACM and MGT respondents' responses in most cases. Any statistically significant differences between the two groups are highlighted in the discussion of the findings.

4.6.1 Existence and Outsourcing of Internal Audit Functions

Table 4.24 presents the proportions of the ACM and MGT respondents' organisations with an IA function, either in-house, outsourced, or both. An IA function exists in 84% of the respondents' organisations; 46% have a fully outsourced IA function, 30% have a fully in-house IA function, and 8% have both in-house and outsourced IA functions. Organisations with both in-house and outsourced IA functions have an average of 39% of the IA activities outsourced in the last financial year, ranging from 5% to 80%.

Table 4.24: Existence of In-house vs. Outsourced IA Functions in ACM/MGT's Organisations

	%
No IA function	16
Outsourced IA function only	46
In-house IA function only	30
Both in-house and outsourced IA functions	8
Total	100



Among organisations with an IA function, 55% are fully outsourced, mostly to a CPA firm other than the organisations' external auditors (89%). Organisations with a fully in-house IA function tend to be larger in size compared to those with a fully outsourced IA function. The average total annual revenues of these organisations are S\$1,055 million and S\$149 million respectively. This is not surprising given that larger organisations are more likely to have the resources and economies of scale to set up an in-house IA function. The average number of full-time employees in fully in-house IA functions is 9.5. Organisations with both in-house and outsourced IA functions have an average of S\$1,988 million in total annual revenue and an average of 9.6 full-time employees in the in-house IA department. Thus, these organisations are more similar to organisations with a fully in-house IA function than those with a fully outsourced IA function.

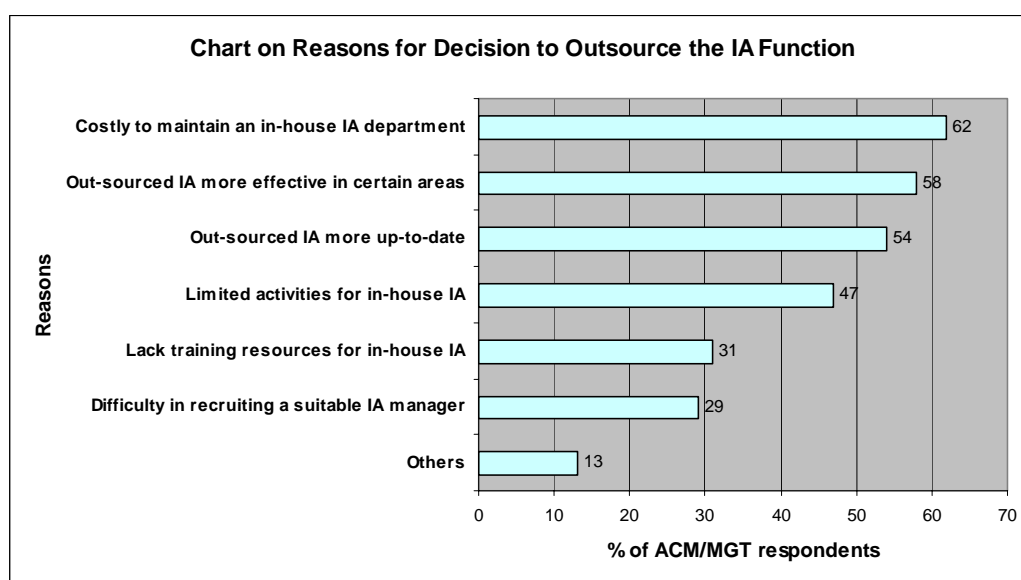
To establish whether the prevalence of outsourced IA functions among the respondents' organisations is representative of Singapore listed companies in general, we examined the 2004 annual reports of 431 local companies listed on the Singapore Exchange. We found that 80% of the listed companies have an IA function, of which 57% outsource their IA function. These proportions are very similar to our respondents' corresponding proportions of 84% and 54%, which suggest that our sample is fairly representative of the targeted population.

To provide some perspectives on whether the trend of IA outsourcing will continue in the near future, we ask the respondents to assess the likelihood that their organisations will outsource or continue to outsource some or all of the IA function in the next three years, on a scale of 0 (not at all likely) to 10 (extremely likely). The respondents' average likelihood assessment is significantly higher for organisations with a fully outsourced IA function than for organisations with a fully in-house IA function (8.5 vs. 2.7 respectively), which suggests that these organisations are likely to continue operating their IA function in its current form. Interestingly, the respondents from organisations with both in-house and outsourced IA functions have similar likelihood assessments (average of 8.1) as those with a fully outsourced IA function, suggesting that they are likely to continue outsourcing at least part of their IA activities in the near future. Overall, the results suggest that there will be continuing demand for both in-house and outsourced IA functions by different organisations.

Table 4.25 presents the proportions of the respondents selecting the various listed reasons as applicable to their organisation's decision to outsource or continue to outsource some or all of its IA activities. The results are based on the respondents whose organisations have outsourced IA functions. The cost of maintaining an in-house IA function is the most frequently selected reason for IA outsourcing, followed by perceived effectiveness of outsourced providers. Other cited reasons include greater independence of outsourced providers from management, poor career path of in-house internal auditors, and lack of IT audit skills.

Table 4.25: Reasons for Decision to Outsource the IA Function

Reasons	%
Too costly to maintain an in-house IA department	62
Certain audit areas are more effectively performed by outsourced provider	58
Outsourced provider is up-to-date with current best practices	54
Limited scope of activities to warrant an in-house IA department	47
Lack of resources for training in-house IA personnel	31
Difficulty in recruiting a suitable IA manager	29
Others	13



The respondents whose organisations currently do not have an IA function assess their organisation as moderately likely to establish one in the next three to five years, with an average likelihood rating of 6.1 on a scale of 0 (not at all likely) to 10 (extremely likely). The majority (59%) of them cited “high cost of maintaining an IA function” as a main reason for why their organisation currently does not have an IA function. This is followed by “no regulatory requirements to establish an IA function” (47%) and “an IA function is not likely to add much value to the organisation” (41%). The latter suggests that more can be done by the IIAS to promote the benefits of having an IA function to organisations. Other reasons identified by the respondents include size and age of the organisation and lack of suitable candidates.

4.6.2 Comparisons between In-house and Outsourced IA Functions

To provide some perspectives on the similarities and differences between outsourced and in-house IA functions, we perform a comparative analysis on various aspects of fully in-house and fully outsourced IA functions. We omit organisations with partially outsourced IA functions in this analysis as the proportion of outsourced activities varies widely and there is only a small proportion of such companies (8%).

Level of reporting

Table 4.26 presents the proportions of in-house and outsourced IA functions reporting to the various listed organisation levels, both functionally and administratively. Generally, there is no significant difference in the reporting levels between in-house and outsourced IA functions, with the exception that in-house IA functions are more likely to report administratively to the CEO compared to outsourced IA functions, which are more likely to report administratively to the CFO.

Table 4.26: Level of Reporting of In-House vs. Outsourced IA Functions

Reporting Level	Functional		Administrative	
	In-house %	Outsourced %	In-house %	Outsourced %
Audit Committee (AC)	84	87	6	15
Chief Executive Officer (CEO)	0	2	57	10
Chief Financial Officer (CFO)	0	0	20	44
CEO and CFO	0	0	10	18
AC and CEO/CFO/Others	16	11	3	8
Others	0	0	4	5
Total	100	100	100	100

Internal Audit Budgets

About 71% of the respondents whose organisations have a fully in-house or a fully outsourced IA function provided information about the annual expenditure budget for the IA function in the last financial year. The average annual expenditure budget is about S\$464,000 for a fully in-house IA function and about S\$52,000 for a fully outsourced IA function. As noted earlier, organisations with a fully outsourced IA function are smaller in size compared to those with a fully in-house IA function. Consequently, it is not surprising that they also have smaller IA budgets.

Services performed

To explore whether in-house and outsourced IA functions provide different levels of services in specific areas, we compare the proportions of fully in-house vs. fully outsourced IA functions that perform the various services listed in Table 4.27. The results are based on 30 fully in-house IA functions and 45 fully outsourced IA functions for which responses were received.

Table 4.27 indicates that, generally, a higher proportion of the in-house IA functions performs each of the services than outsourced IA functions. Among others, the in-house IA functions are significantly more likely to be involved in fraud assessment, detection and investigation than the outsourced IA functions. They are also more likely to provide internal consultation to management, support and assist the external auditors and the Board, and review information security, data privacy issues and protection mechanisms than the outsourced IA functions.

Given that organisations with a fully outsourced IA function are generally smaller than those with a fully in-house IA function, they are likely to be more selective and targeted in the scope of IA services acquired. Of the 23 services listed in Table 4.27, the fully outsourced IA functions provide an average of 10 services, compared to 16 for the fully in-house IA functions.

There is no statistically significant difference in the responses between the ACM and MGT respondents except for two areas. Specifically, the ACM respondents are more likely than the MGT respondents to indicate that their outsourced IA functions provide support and assistance to the external auditors (47% vs. 18%) and appraise the governance leadership, structures and processes (41% vs. 14%). These differences may reflect the audit committees' greater focus on IA functions related to the external audit and corporate governance areas.

Table 4.27: Services Provided by In-House vs. Outsourced IA Functions

Services Provided	In-house %	Out-sourced %
1. Design information and internal control systems	* 43	20
2. Implement information and internal control systems	46	27
3. Appraise information and internal control systems	93	87
4. Appraise the reliability of financial reporting information	* 80	56
5. Appraise reliability of operational information	73	62
6. Appraise compliance with internal policies and regulations	93	91
7. Appraise compliance with external policies and regulations	77	64
8. Appraise the safeguarding of organisational assets	* 97	62
9. Appraise deployment and usage of organisational resource	* 50	27
10. Appraise operational economy, efficiency and effectiveness	40	33
11. Assess likelihood of fraud in the organisation's operations	* 90	62
12. Detect occurrence of fraud in the organisation's operations	* 77	27
13. Investigate any detected fraud	* 87	20
14. Provide internal consultation to the management	* 73	22
15. Provide support and assistance to the external auditors	* 77	29
16. Provide support and assistance to the AC	93	78
17. Provide support and assistance to the Board of Directors	* 53	27
18. Appraise achievement of organisation's strategic objectives	20	9
19. Appraise the achievement of operational objectives	37	20
20. Appraise the robustness of the risk management system	70	56
21. Appraise governance leadership, structures and processes	37	24
22. Review IT and information security of the organisation	* 80	47
23. Review data privacy issues and protection mechanisms	* 70	27

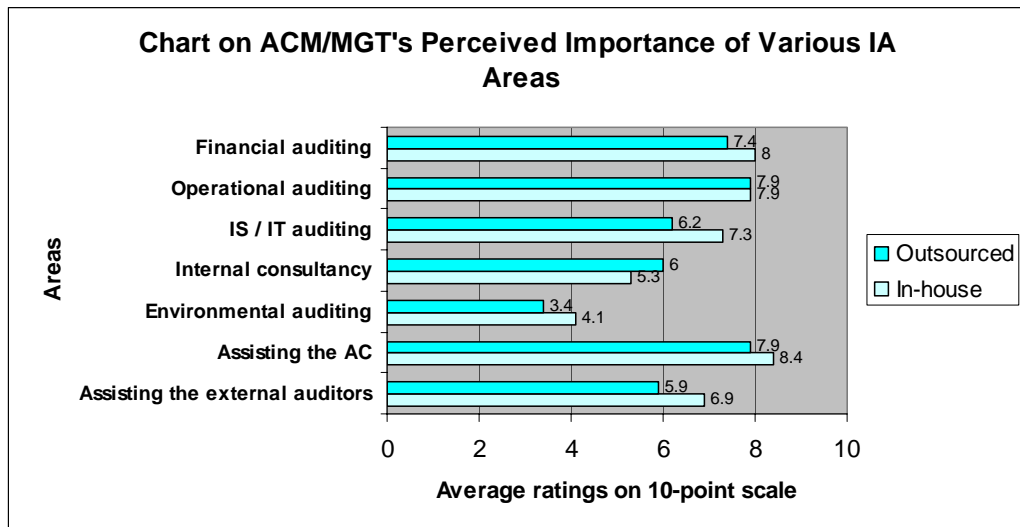
* Denotes a statistically significant difference between the proportions of in-house and outsourced IA functions performing the service

Importance of Audit Areas

The ACM and MGT respondents are also asked to rate the importance of the various areas to which their IA function should devote its time and resources, on a scale of 0 (not at all important) to 10 (extremely important). The average ratings for in-house and outsourced IA functions are presented in Table 4.28. The only statistically significant difference in the ratings between the in-house and outsourced IA functions is in the importance of IS/IT auditing, where the ratings are higher for the in-house IA functions. The respondents' relative ratings for in-house and outsourced IA functions across the different areas are largely similar, with assisting the AC, operational auditing and financial auditing being rated as highly important.

Table 4.28: ACM/MGT's Perceived Importance of Various IA Areas

Areas	Average rating of	
	In-house	Outsourced
Financial auditing	8.0	7.4
Operational auditing	7.9	7.9
IS / IT auditing	7.3	6.2
Internal consultancy	5.3	6.0
Environmental auditing	4.1	3.4
Assisting the AC	8.4	7.9
Assisting the external auditors	6.9	5.9



We also compare the ACM and MGT respondents' ratings for in-house IA functions with similar ratings of the IAMs (refer to Table 4.14) to explore the existence of an expectation gap between the two groups. No statistically significant difference is found except for the ratings on the importance of assisting the external auditors, where the ACM and MGT respondents with an in-house IA function give higher importance ratings than the IAMs (average ratings of 6.9 and 4.2 respectively). This finding suggests that an expectation gap may exist in that in-house IA functions may be devoting less time and resources to assisting the external auditors than is expected of them by ACMs and MGT.

Perceived Status and Performance

To assess whether there is any systematic difference in the perceived status and performance of in-house vs. outsourced IA functions, we compare the respondents' agreement ratings with various statements relating to their IA function listed in Table 4.29, on a scale of 0 (strongly disagree) to 10 (strongly agree). The respondents'

average agreement ratings for in-house and outsourced IA functions are presented in Table 4.29. The respondents with an in-house IA function agree more strongly that their IA function has good working relationships with management, the AC, external auditors and auditees than those with an outsourced IA function. This could be attributed to greater interaction of in-house IA functions with these parties than outsourced IA functions. Similarly, the respondents agree more strongly that their IA function adds value to the organisation when it is in-house than when it is outsourced. These results are consistent with the broader range of services performed by in-house IA functions than outsourced IA functions noted earlier. However, the respondents' perceptions of the overall effectiveness of in-house vs. outsourced IA functions do not differ significantly.

Table 4.29: ACM/MGT's Perceived Status and Performance of IA Functions

Statements	Average rating of	
	In-house	Out-sourced
<i>Status</i>		
IA is critical to the organisational success	7.1	6.2
IA contributes significantly to organisational economy, efficiency and effectiveness	6.6	6.2
IA plays an important role in corporate governance	7.0	7.8
IA enjoys a high organisational status	6.7	6.0
IA has a good working relationship with management	* 7.8	6.6
IA has a good working relationship with the AC	* 8.2	7.5
IA has a good working relationship with the external auditors	* 8.0	6.6
IA has a good working relationship with the auditees	* 7.4	6.6
<i>Performance</i>		
IA communicates its audit objectives to management clearly	8.0	7.4
IA covers all key business areas adequately	7.3	6.9
IA executes the audit plan effectively	7.8	7.3
IA executes the audit plan efficiently	7.7	7.3
IA provides constructive and value-added recommendations	7.5	7.3
IA communicates and reports on a timely basis	7.7	7.3
IA reports are clear and well-organized	7.8	7.4
IA follows up on management's responses to IA reports	7.9	7.4
IA adds value to the organisation	* 7.7	6.8
<i>Overall effectiveness</i>	7.5	7.0

* Denotes a statistically significant difference between the ratings for in-house and outsourced IA functions

There is no statistically significant difference between the ratings of the ACM and MGT respondents for outsourced IA functions, but some interesting differences for in-house IA functions. Specifically, the ACM respondents with an in-house IA function agree more strongly than the MGT respondents that the IAD (1) plays an important role in corporate governance, (2) has a good working relationship with the AC, (3) covers all key business areas adequately, (4) executes the audit plan effectively and efficiently, and (5) adds value to the organisation. This suggests that the ACMs have more positive perceptions of in-house IA functions than the MGT. The differences drive some of the differences in perceived status and performance between in-house and outsourced IA functions discussed earlier (specifically relating to whether IA has a good working relationship with the AC and adds value to the organisation).

Audit Committee's Composition and Interactions with IA Functions

Given that the AC plays an important role in overseeing the IA function, we explore whether there is any systematic difference in the AC's composition and interactions with fully in-house and fully outsourced IA functions.

The Singapore Code of Corporate Governance 2005 recommends that the AC should comprise at least three directors, all non-executive, the majority of whom should be independent. Further, at least two members should have accounting or related financial management expertise or experience.

Among the ACs of the ACM and MGT respondents' organisations, all have at least three members, 78% have only non-executive directors as members and all except one have a majority of independent directors as members. Only 69% have at least two members with financial expertise, with a further 30% having one member with financial expertise. A total of 54% of these organisations meet all the above criteria recommended by the Code.

The composition of the ACs in organisations with an in-house vs. outsourced IA function is presented in Table 4.30. The ACs in organisations with an in-house IA function appear to be more likely to be made up of all non-executive members, all independent members and have at least two members with financial expertise than the ACs in organisations with an outsourced IA function. However, none of the differences is statistically significant.

To explore whether other attributes of the ACs differ between organisations with an in-house IA function and those with an outsourced IA function, the ACM respondents are also asked whether the AC approves the hiring and dismissal of the chief internal auditor or the outsourced providers, whether the AC has a written charter that clearly sets out its authority and duties, and the number of AC meetings held in the last financial year, both in total as well as with the internal auditors, either in the presence or absence of management. The results are presented in Table 4.30. Most of the ACs are involved in approving the hiring and dismissal of the chief internal auditor or outsourced IA providers. The ACs in organisations with an in-house IA function appear to be more likely to have a written charter and hold more AC meetings in total

as well as with the internal auditors in the presence of management, than the ACs in organisations with an outsourced IA function. However, the differences are not statistically significant except for the number of meetings with internal auditors in the presence of management. (Note, however, that the lack of statistical significance could be attributed to the small sample size of the ACM respondents which lowers the power of our statistical tests.) The finding that in-house IA functions meet their ACs more frequently than outsourced IA functions can be attributed to our earlier finding that in-house IA functions generally perform a broader range of services than outsourced IA functions.

Table 4.30: Composition and Other Attributes of ACM/MGT Respondents' Audit Committees

	In-house	Out-sourced
<i>Audit Committee (AC) composition (based on ACM/MGT responses):</i>		
Percentage of ACs with all non-executive members	90	75
Percentage of ACs with a majority of independent members	97	100
Percentage of ACs with all independent members	60	40
Percentage of ACs with at least two members with financial expertise	83	72
Percentage of AC satisfying all the criteria in the Code*	60	57
<i>Other AC attributes (based on ACM responses):</i>		
Percentage of ACs that approve the hiring of the chief internal auditor or outsourced IA providers	91	94
Percentage of ACs that approve the dismissal of the chief internal auditor or outsourced IA providers	91	94
Percentage of ACs with a written charter	100	78
Number of AC meetings held in the last financial year	4.3	3.6
Number of AC meetings held with internal auditors in the presence of management	3.3	1.2
Number of AC meetings held with internal auditors in the absence of management	0.5	0.7

* This refers to the recommendations of the Singapore Code of Corporate Governance 2005 that an AC should comprise at least three directors, all non-executive, the majority of whom should be independent, and at least two members should have accounting or related financial management expertise or experience.

The ACM respondents are also asked to indicate the matters discussed during the AC's meetings with internal auditors as well as the IA-related functions performed by the AC in the last financial year. The results are presented in Table 4.31 and Table 4.32 respectively. Generally, a higher proportion of the ACs with an in-house IA function discusses each of the matters listed in Table 4.32 than the ACs with an outsourced IA function, especially with respect to IA staffing matters and internal auditors' involvement in the external audit. In terms of IA-related functions performed by the ACs, a higher proportion of the ACs with an in-house IA function performs each of the services listed in Table 4.33 than the ACs with an outsourced IA function, except for approval of IA budgets. However, none of these differences is statistically significant except for review of IA staffing matters.

Table 4.31: Matters Discussed During AC's Meetings with Internal Auditors

Matters Discussed	In-house %	Outsourced %
IA plans	100	82
Major IA findings and recommendations	100	76
Management's follow-up of IA findings and recommendations	100	88
IA staffing matters	* 91	29
IA budgets	73	53
Internal auditors' involvement in the external audit	64	29

* Denotes a statistically significant difference between the proportions of in-house and outsourced IA functions

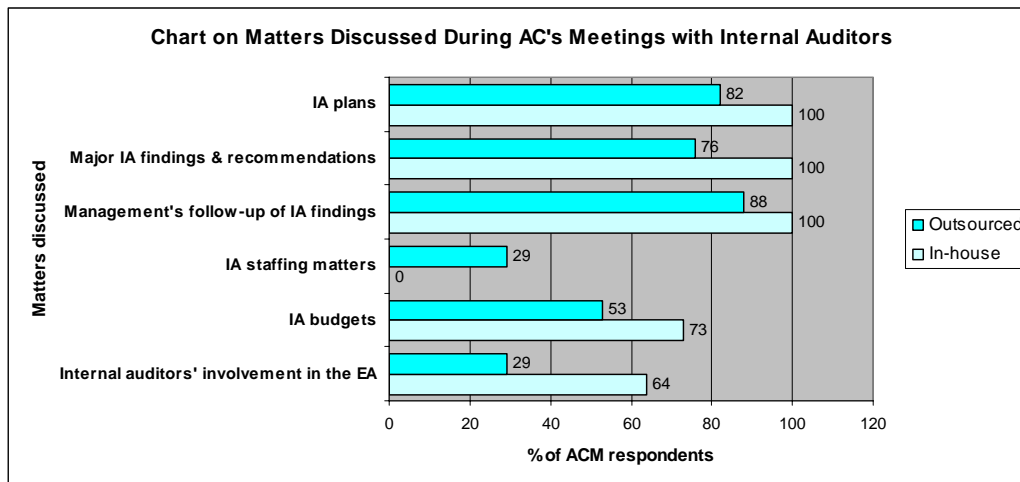
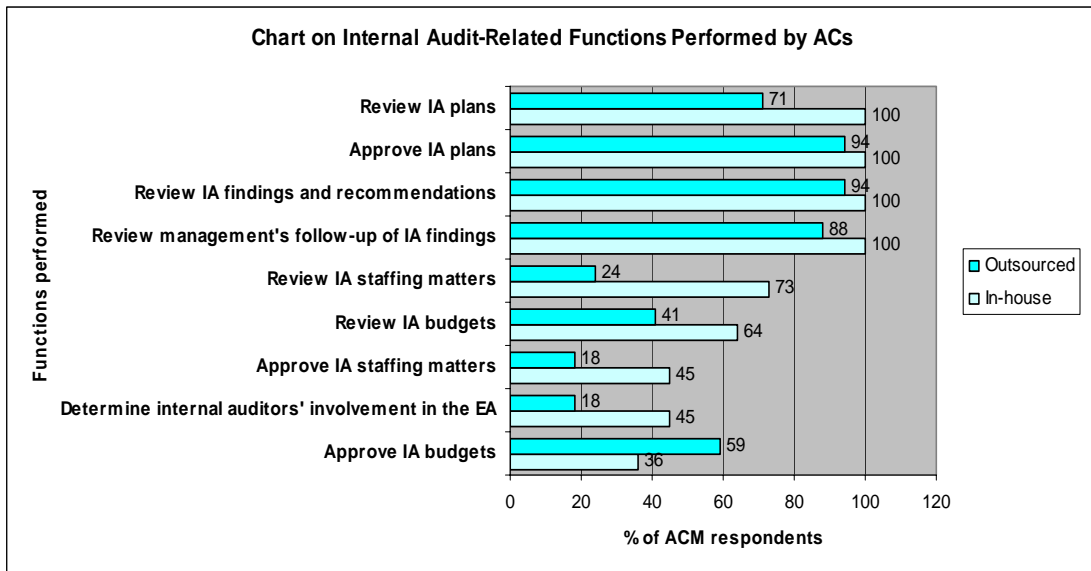


Table 4.32: Internal Audit-Related Functions Performed by ACs

Functions Performed	In-house %	Outsourced %
Review IA plans	100	71
Approve IA plans	100	94
Review IA findings and recommendations	100	94
Review management's follow-up of IA findings and recommendations	100	88
Review IA staffing matters	* 73	24
Review IA budgets	64	41
Approve IA staffing matters	45	18
Determine internal auditors' involvement in the external audit	45	18
Approve IA budgets	36	59

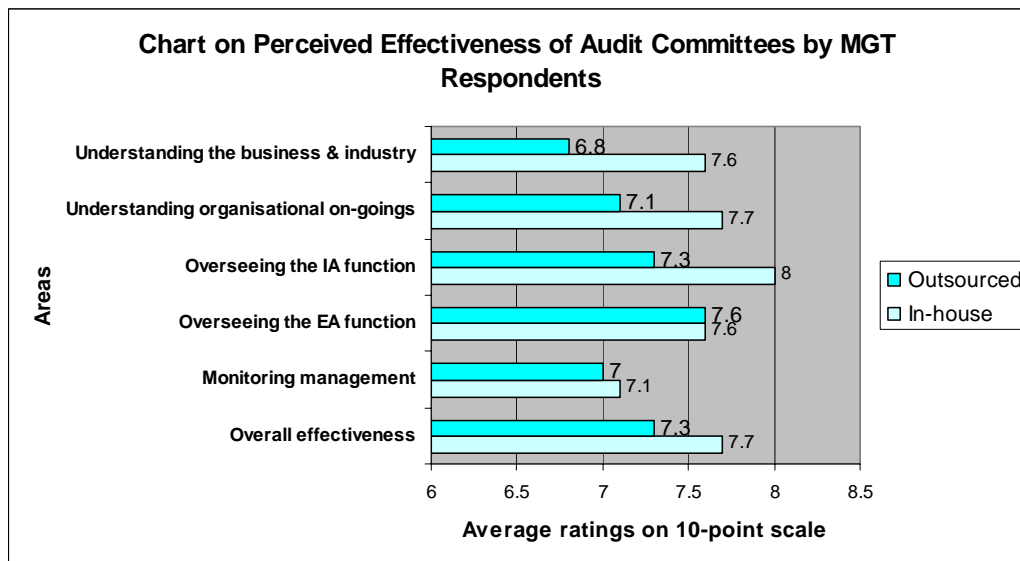
* Denotes a statistically significant difference between the proportions of in-house and outsourced IA functions



Lastly, Table 4.33 presents the MGT respondents' ratings of the effectiveness of their organisation's AC, on a scale of 0 (not at all effective) to 10 (extremely effective). Although the MGT respondents with an in-house IA function generally have higher effectiveness ratings for their AC than those with an outsourced IA function, none of the differences is statistically significant.

Table 4.33: Perceived Effectiveness of Audit Committees by MGT Respondents

Areas	Average rating of	
	In-house	Outsourced
Understanding the business and industry	7.6	6.8
Understanding the on-goings in the organisation	7.7	7.1
Overseeing the IA function	8.0	7.3
Overseeing the external audit function	7.6	7.6
Monitoring management	7.1	7.0
Overall effectiveness	7.7	7.3



4.7 Perspectives on Current Issues and Developments Facing the Internal Audit Functions and Profession

4.7.1 Internal Control Effectiveness Assessment and Attestation

Under Section 404 of the Sarbanes-Oxley Act (2002), listed companies in the United States are required to disclose in the annual reports management's assessment of the effectiveness of the companies' controls over financial reporting as well as to obtain auditors' attestation on management's assessment of financial reporting control effectiveness. This section aims to provide some insight on IA functions' involvement in, and the views of the IAM, ACM and MGT respondents on, such a requirement.

Twenty-one percent of the IAMs' organisations are required to undergo an assessment of the effectiveness of controls over financial reporting as a result of the Sarbanes-Oxley Act. Most of these organisations are listed on the New York Stock Exchange or NASDAQ. These organisations' IAMs indicate that their IADs are significantly involved with the financial reporting control review and assessment required under the Act, with an average rating of 8.5 on a scale of 0 (not at all involved) to 10 (extensively involved). Among those with outsourced IA function, the outsourced IA function is not as significantly involved (average rating of 3.3).

In contrast, only 6% of the ACM and MGT respondents' organisations are required to undergo an assessment of financial reporting control effectiveness as a result of the Sarbanes-Oxley Act. This is likely because the ACM and MGT respondents' organisations are predominantly listed only on the Singapore Exchange, which are less affected by U.S. regulations.

Table 4.34 shows the levels of agreement, on a scale of 0 (strongly disagree) to 10 (strongly agree), of the various respondent groups with alternative arrangements regarding the reporting of management's assessment of financial reporting control effectiveness and auditors' attestation of management's assessment.

The IAMs' average ratings indicate that they are highly supportive of a requirement for management to report their assessment of financial reporting control effectiveness either in the annual report or to the AC or the Board of Directors (BOD). In contrast, both the ACM and MGT respondents are relatively more supportive of the requirement for management to provide an annual assessment of the effectiveness of financial reporting controls to the AC or BOD than to disclose the assessment in the annual report. However, the MGT respondents are relatively less supportive of both of these requirements than the IAM and ACM respondents.

In terms of attesting to management's assessment of the effectiveness of financial reporting controls, the IAMs are more supportive of attestation by the external auditors than by internal auditors. Interestingly, the ACM and MGT respondents are equally supportive of attestation by either the internal auditors or external auditors. However, the MGT respondents are relatively less supportive of attestation by either party than the IAM and ACM respondents, while the ACM respondents are less supportive than the IAM respondents of attestation by external auditors, but not of attestation by internal auditors.

Table 4.34: Respondents' Agreement with Alternative Arrangements of Financial Reporting Control Assessment Reporting and Attestation

Alternative arrangements	Average rating of		
	IAM	ACM	MGT
Management should provide an assessment of the effectiveness of internal controls over financial reporting in the <i>annual report</i>	8.6	7.6	6.6
Management should provide an annual assessment of the effectiveness of internal controls over financial reporting to the <i>Audit Committee or the Board of Directors</i>	8.8	8.3	7.3
<i>Internal auditors</i> should attest to management's assessment of the effectiveness of internal controls over financial reporting.	7.8	7.8	6.7
<i>External auditors</i> should attest to management's assessment of the effectiveness of internal controls over financial reporting	8.9	7.9	6.8

4.7.2 Whistle-blowing Mechanisms

Under Section 301 of the Sarbanes-Oxley Act (2002), ACs of listed companies in the United States are responsible for establishing procedures for “the receipt, retention, and treatment of complaints received regarding accounting, internal controls, or auditing matters,” and “the confidential, anonymous submissions by employees of concerns regarding questionable accounting or auditing matters.” In a similar vein, the Singapore Code of Corporate Governance 2005 recommends that the AC should “review arrangements by which staff of the company may, in confidence, raise concerns about possible improprieties in matters of financial reporting or other matters,” so as to “ensure that arrangements are in place for the independent investigation of such matters and for appropriate follow up action.” These requirements underscore the importance of maintaining an effective whistle-blowing mechanism in organisations.

Sixty-seven percent of the IAMs' organisations have implemented whistle-blowing mechanisms, defined as any policies and procedures to confidentially receive and handle internal and/or external complaints. These IAMs rate their IAD's involvement in the implementation and/or monitoring of the whistle-blowing mechanisms in their organisations as high, with an average rating of 7.3 on a scale of 0 (not at all involved) to 10 (extensively involved). Among those with an outsourced IA function, the outsourced IA function's involvement is very low (average rating of 0.7), with the majority (87%) not involved at all.

In contrast, only 37% of the ACM and MGT respondents' organisations have implemented whistle-blowing mechanisms. All of these organisations, except for two, have an IA function, either in-house, outsourced or both. The respondents of the organisations with a fully in-house IA function rate their IAD's involvement in the implementation and/or monitoring of the whistle-blowing mechanisms in their organisations as high, with an average rating of 7.3, similar to the average rating by the IAMs. For organisations with a fully outsourced IA function, the respondents rate their outsourced IA providers' involvement lower, with an average rating of 5.1. For the few organisations with both in-house and outsourced IA functions, the contrast in the level of involvement between the in-house and outsourced IA functions is even greater, with average ratings of 6.8 and 2.5 respectively. Overall, these results suggest that in-house IA functions play a significant role in implementing and monitoring organisations' whistle-blowing mechanisms.

We further solicit the respondents' views on whether they agree that the IA function has the independence, knowledge and skills to effectively implement and/or monitor whistle-blowing mechanisms in their organisations, on a scale of 0 (strongly disagree) to 10 (strongly agree). For organisations with a fully in-house IA function, the average rating of the ACM and MGT respondents is 6.9, very similar to the average ratings of 7.1 of the IAM respondents. For organisations with a fully outsourced IA function, the average rating of the ACM and MGT respondents is slightly lower at 6.2, but not significantly different from those with a fully in-house IA function. For the few organisations with both in-house and outsourced IA functions, the average ratings for the in-house and outsourced IA functions are fairly similar (7.3 vs. 7.1). No statistically significant difference exists in the ratings of respondents between organisations with and without whistle-blowing mechanisms. These results suggest that the ACM and MGT respondents do not have different perceptions about the effectiveness of in-house and outsourced IA functions in implementing or monitoring whistle-blowing mechanisms. Overall, the responses suggest that there are ample opportunities for IA functions to assist their organisations in establishing and maintaining whistle-blowing mechanisms.

4.7.3 Problem Areas Faced by IADs

The IAMs are asked to rate, on a scale of 0 (not at all a problem) to 10 (a very significant problem), the extent to which each of the problem areas shown in Table 4.35 is a significant problem currently faced by their IAD. Table 4.35 reports the average ratings and the proportions of IAMs whose rating is above 5 (i.e., a moderate problem). The two most significant problem areas are: (1) difficulty in retaining good IA staff, and (2) lack of IT audit skills, with the majority of the IAMs considering them to be a significant problem. Difficulty in keeping abreast of professional developments is also considered by a considerable proportion of the IAMs (40%) to be a significant problem. Two additional significant problem areas cited by the IAMs are the AC's perception of IA's lack of independence from management, and lack of access to systems and databases.

Table 4.35: IAMs' Assessments of Problem Areas Faced by IADs

Problem Areas	Average rating	%*
Difficulty in retaining good IA staff	6.0	60
Lack of IT audit skills	5.6	50
Difficulty in keeping up to date with professional developments	5.0	40
Insufficient status in the organisation	4.3	29
Misconception by top management of the role and purpose of IA	4.2	33
Inadequate budget for IA activities	4.2	29
Lack of cooperation from auditees	4.1	23
Lack of available IA training	3.8	27
Inadequate support from top management	3.7	25
Difficulty in accessing organisational information for IA purposes	3.4	17
Ad hoc requests from external auditors, AC and/or management interfering with audit plan	3.2	25
No or ineffective AC	2.3	11
Conflicting demands from external auditors, AC and/or management	2.3	10
Lack of independence from line management	2.0	6
Lack of autonomy in planning IA activities	1.8	4

* Proportion of the IAMs who rated the area above 5 (“a moderate problem”).

4.7.4 IAMs' Views on Various IA-Related Issues

Table 4.36 shows the IAMs' average agreement ratings for various statements pertaining to issues related to the IAD and the IA profession, among others, on a scale of 0 (strongly disagree) to 10 (strongly agree).

In terms of the IAD's role in the organisation, the IAMs generally agree that the IAD plays an important role in the organisation's corporate governance and contributes significantly to the organisation's effectiveness and success. They agree less strongly that the IAD enjoys a high status in the organisation.

In terms of interactions with other parties, the IAMs generally agree that the IAD has good working relationships with various parties, particularly with the AC. They are also quite positive about the recognition and support provided by top management and the AC, although they are somewhat neutral about whether management regards the IAD as a training ground rather than for a career, and whether the auditees have an adequate understanding of the IA function.

In terms of job satisfaction factors, the IAMs are positive about their freedom to report management malpractices and problems without jeopardizing their position, an

important condition for them to play an effective role in corporate governance. Although they are generally satisfied with their status in the organisation, they are relatively less satisfied with their total compensation package. Among the IAMs whose IADs engage in overseas work, 27% agree that their family relationships have suffered because of the amount of travel associated with their IA position.

As for future trends, the IAMs are quite positive that the job opportunities for internal auditors will increase in the next five years. They also generally agree that the importance of the IAD to their organisations as well as the interactions between internal and external auditors will increase significantly in the next five years.

Finally, the IAMs generally agree on the importance of professional qualifications in enhancing the public awareness and recognition of the IA profession in Singapore. However, they are more neutral about whether the IAS has successfully promoted the public awareness and recognition of the IA profession in Singapore, and strongly believe that the IAS needs a more effective strategy to achieve this. Some specific suggestions provided by the IAMs on how the IAS can promote the IA profession in Singapore include “lobbying for legislations to require all internal auditors to have CIA/CISA or professional certificates,” “conduct presentation to directors about IA best practices, fraud, corporate governance, enterprise risk management” and “recruitment of student members, conduct talks and seminars to penetrate the student market.”

Table 4.36: IAM's Views on Various IA-Related Issues

Statements	Average rating
a) IAD's Role in the Organisation	
The IAD is critical to the success of my organisation.	7.5
The IAD contributes significantly to my organisation's economy, efficiency and effectiveness.	7.7
The IAD plays an important role in my organisation's corporate governance.	8.4
The IAD enjoys a high status in my organisation.	6.4
b) IAD's Working Relationships with Others	
The IAD has a good working relationship with management.	7.4
The IAD has a good working relationship with the AC.	7.8
The IAD has a good working relationship with the external auditors.	6.6
The IAD has a good working relationship with the auditees.	7.0
c) Recognition and Support Provided to IADs	
My organisation's top management recognizes the contributions of the IAD.	7.2
My organisation's AC recognizes the contributions of the IAD.	7.8
My organisation provides sufficient resources to operate the IAD effectively.	6.9
My organisation's management follows up promptly on IAD's findings and recommendations.	6.5
My organisation's auditees regard the IAD as a resource rather than a threat.	6.5
My organisation's management regards IAD as a training ground for management rather than for a career.	4.7
My organisation's auditees have inadequate understanding of the IA function.	5.2

Table 4.36: IAM's Views on Various IA-Related Issues (Continued)

Statements	Average rating
d) Factors Related to Job Satisfaction	
I am satisfied with my total compensation package.	5.6
I am satisfied with my status in my organisation.	6.5
I have freedom to report management malpractices and problems without jeopardizing my position.	7.8
My IA experience provides excellent opportunities for promotion to other management positions.	5.7
My family relationships have suffered because of the amount of travel associated with my IA position.	3.2
e) Future Trends	
The importance of the IAD to my organisation will increase significantly in the next five years.	6.6
The job opportunities for internal auditors will increase significantly in the next five years.	7.3
The interactions between internal and external auditors will increase significantly in the next five years.	6.4
f) Role of IAS	
The lack of internal auditors with professional IA qualifications will significantly undermine the public awareness and recognition of the IA profession in Singapore.	6.2
Over the past 10 years, the IAS has successfully promoted the public awareness and recognition of the IA profession in Singapore.	5.5
The IAS needs a more effective strategy to promote the public awareness and recognition of the IA profession in Singapore.	8.1

4.7.5 ACM/MGT's Perspectives on IA-Related Issues

Given that ACs and top management play important roles in supporting the IA function, we solicit the perspectives of the ACM/MGT respondents on various aspects of IA. Only the aggregated results are reported as there is no statistically significant difference in the responses between the ACM and MGT respondents for most of the cases except one, which is separately reported below.

Staff Development Opportunities

Table 4.37 presents the proportions of the ACM and MGT respondents' organisations with an in-house IA function that provide the various listed staff development opportunities. Seventy-five percent of the respondents view their IAD as providing long-term IA career prospects, while 65% view the IAD as providing opportunities for promotion to management positions outside of IA. A lower proportion of the respondents views the IAD as providing opportunities for training attachment with the IAD for management staff, or for training attachment to other departments for IA staff.

Table 4.37: Staff Development Opportunities

Opportunities	%
Long term IA career prospects	75
Promotion to management positions outside of IA	65
Training attachment with IA for management staff	35
Training attachment to other department for IA staff	32

Support for Training and Development

Table 4.38 presents the proportions of the ACM and MGT respondents' organisations with an in-house IA function that provide support for the various training and professional development activities undertaken by IA personnel. The respondents' organisations are most supportive of external courses or seminars on IA-related topics (80%), but relatively less supportive of external courses or seminars on general business topics (58%). In terms of support for registration and examinations for professional qualifications, a higher level of support is provided for the CIA qualification (55%) than for the CISA qualification (38%). Only about half of the organisations provide support for involvement in professional organisations such as the IIAS, and an even lower proportion (38%) supports external quality assurance assessment of the IA function by independent assessors.

Table 4.38: Support of ACM/MGT Respondents' Organisations for Specific Training and Professional Development Activities

Activities	%
External courses or seminars on IA-related topics	80
External courses or seminars on general business topics	58
Registration and examinations for the Certified Internal Auditor (CIA) qualification	55
Registration and examinations for the Certified Information Systems Auditor (CISA) qualification	38
Involvement in professional organisations	48
External quality assurance assessment of the IA function by independent assessors accredited by the IIA	38

Preferred Academic Disciplines for Internal Audit Staff

The ACM and MGT respondents are asked to rank the various academic disciplines listed in Table 4.39 in terms of their desirability as preferred sources of in-house IA staff, with 1 being the most desirable. The average ranks of the academic disciplines as well as the percentages of respondents ranking each discipline as their first and second choices are presented in Table 4.39. An overwhelming majority of the respondents (80%) choose Accounting as the most desirable academic discipline for IA staff, followed by Finance. Business Information Systems is the third most desirable discipline, with 37% of the respondents ranking it either first or second.

Table 4.39: Preferred Academic Disciplines for IA staff

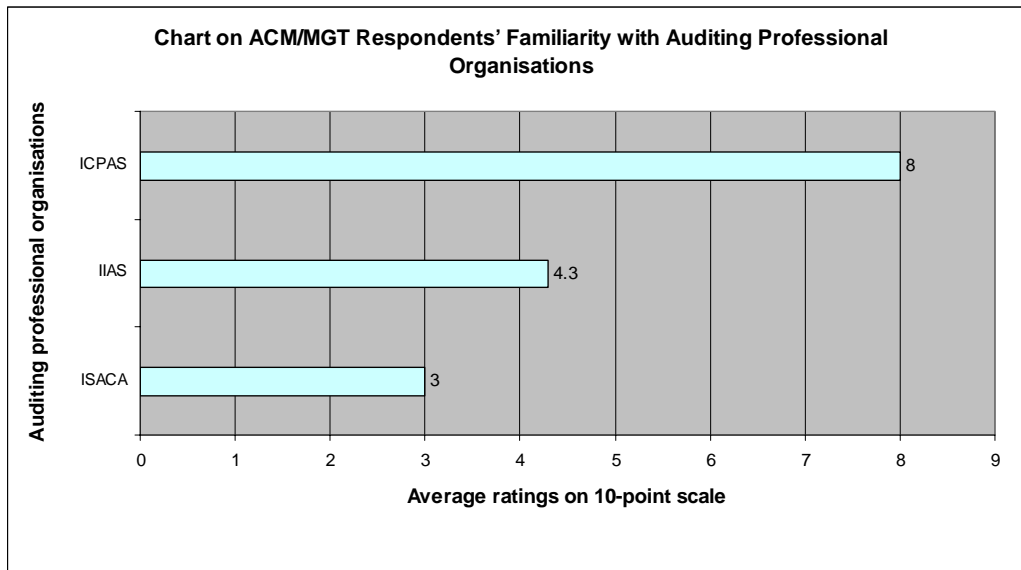
Academic Disciplines	Average ranking	First choice %	Second choice %
Accounting	1.33	80	8
Finance	2.07	31	34
Business Information Systems	2.70	12	25
General Business	2.96	12	14
Engineering	4.02	6	6

Familiarity with Various Auditing Professional Organisations

The ACM and MGT respondents are asked to rate their familiarity with the three major auditing professional organisations listed in Table 4.40, on a scale from 0 (not at all familiar) to 10 (extremely familiar). Table 4.40 presents the respondents' average familiarity ratings. The respondents are highly familiar with the ICPAS, but are relatively less familiar with the IIAS and least familiar with the ISACA.

Table 4.40: ACM/MGT Respondents' Familiarity with Auditing Professional Organisations

Professional Institutions	Average rating
The Institute of Certified Public Accountants of Singapore (ICPAS)	8.0
The Institute of Internal Auditors Singapore (IIAS)	4.3
Information Systems Audit and Control Association (ISACA)	3.0

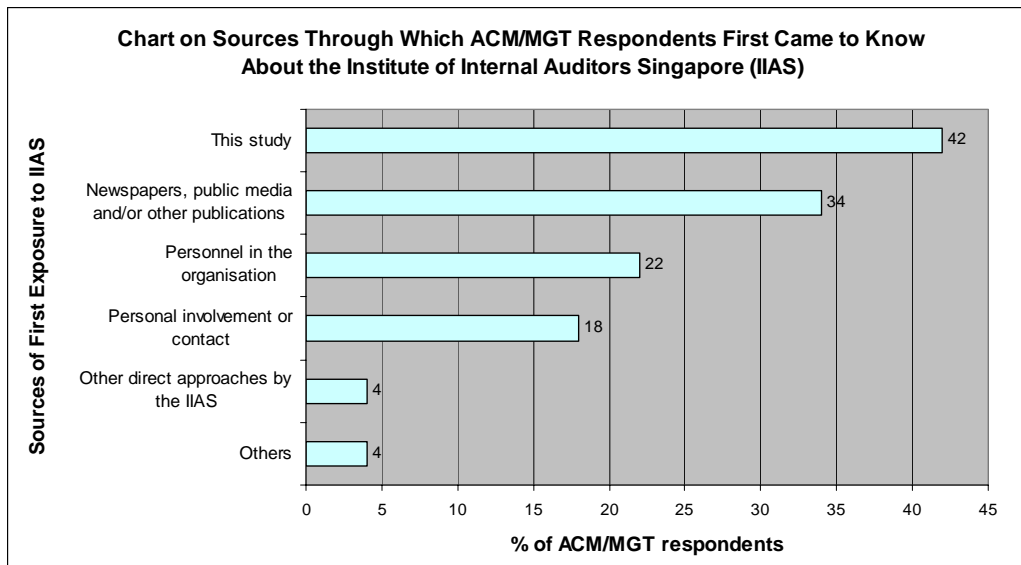


The respondents are also asked how they first came to know about the IIAS. Table 4.41 presents the proportions of the respondents who first came to know about the IIAS through the various listed sources. The respondents' awareness of the IIAS was derived largely through the present study and public media and publications. The third most common source of exposure to the IIAS is through personnel in the organisation. The ACM and MGT respondents have largely similar responses with one exception; a higher proportion of the ACM respondents than the MGT respondents first came to know about the IIAS through personnel in their organisations (35% vs. 16%).

Overall, the results suggest that more can be done by the IAS to increase the public awareness of its role and services, and conducting public studies is an effective means of generating publicity and increasing public recognition and awareness.

Table 4.41: Sources Through Which ACM/MGT Respondents First Came to Know About the Institute of Internal Auditors Singapore (IIAS)

Sources of First Exposure to IIAS	%
This study	42
Newspapers, public media and/or other publications	34
Personnel in the organisation	22
Personal involvement or contact	18
Other direct approaches by the IAS	4
Others	4



5. Discussion and Conclusion

5.1 Discussion of Key Findings and Implications

This study serves to update and extend our understanding of the IA functions and profession in Singapore. Specifically, it provides evidence relating to (1) the profiles of internal auditors, their IADs and organisations, (2) the IADs' roles, activities, resources, practices, and performance, (3) the nature, extent and perceived effectiveness of IADs' interactions with their organisations' ACs and external auditors, (4) the trends in outsourcing of the IA function, and (5) the internal auditors' concerns and expectations relating to current issues and developments in the IA profession and corporate governance. The findings provide insights into the progress made in the past decade, the status quo and the direction of the current IA profession and practices in Singapore. These timely insights will, hopefully, serve as a catalyst in bringing together the various concerned stakeholders to advance and reinforce internal auditors' critical role and contributions to a strong corporate governance culture and practice in Singapore organisations.

To these ends, we solicited the views of professionals both within and outside the IA profession. We surveyed IA managers and senior IA staff from both listed and non-listed organisations in Singapore. We also surveyed Singapore listed organisations' CEOs, CFOs, and ACs, most of whom have close involvement with, and thus in-depth first-hand understanding of, the IA functions in their organisations.

In the following discussion, we highlight some of the key findings and their potential implications:

- *Managing the scope of IA work*

Our findings reveal that the size of in-house IADs remains small (59% of the IADs have five or fewer staff) and has not increased significantly in the last 10 years. Only 29% of the IADs indicate that their IADs' staff strength is likely to increase over the next 12 months. However, our findings show that the IADs' organisations have grown substantially in terms of annual revenue or turnover and number of full-time employees, suggesting that the organisations' scope of operations and complexity have increased. Furthermore, in-house IA functions are involved in providing many more services to their organisation than outsourced IA functions. This raises an important concern of whether IADs are effectively coping with the increased work scope and complexity as well as how they are well-placed to meet their organisation's future demands and expectations. The Board of Directors, particularly the ACs, should constantly monitor the demands on the IADs and ensure that the IADs are adequately staffed and given adequate budgets and resources to effectively discharge their IA responsibilities.

- *Internal auditors' role in preventing and detecting corporate fraud*

The recent spate of corporate scandals and fraud has resulted in greater public concerns and scrutiny over corporate governance in organisations. The ACFE's 2006 survey finds that IA is an effective and common method by which fraud is initially detected. Our findings indicate that in-house IA functions are more extensively involved in fraud assessment, detection and investigation than out-sourced IA functions. However, IADs' involvement with fraud assessment and investigation is greater than with fraud detection. In addition, the proportions of internal auditors who are ACFE members and qualified CFE are quite low (13% and 6% respectively for the IAMs, and 3% and 0% respectively for the IAS). Given the valuable assistance that internal auditors can render to their organization's efforts against fraud, organisations will benefit from providing their IADs with the necessary support to enhance their internal auditors' competency in fraud assessment, detection and investigation.

- *Opportunities for internal auditors to provide additional value-added services*

The landmark Sarbanes-Oxley Act (2002) in the United States has explicitly imposed greater responsibilities on the Board of Directors and management of listed companies and generated great interests in other countries around the world. One of these changes is the requirement for listed companies' management to report on the effectiveness of controls over financial reporting and for the external auditors to attest to the management's assessment. Our findings indicate that 21% of the IAMs' organisations in Singapore are affected by this requirement, mainly because they are listed in the United States. The IADs of these organisations are extensively involved in the required control effectiveness review and assessment. The IAM, ACM and MGT respondents are highly supportive of having similar control effectiveness assessment and attestation requirements in Singapore. In addition, the ACM and MGT respondents are equally supportive of having either their organisation's external or internal auditors to attest to management's control effectiveness assessment. Hence, there exists tremendous potential opportunities for internal auditors to assist their organisations either in the review and assessment of the effectiveness of controls over financial reporting or the attestation of management's control effectiveness assessment.

Another major reform introduced by the Sarbanes-Oxley Act is the requirement of listed companies' ACs to ensure the implementation of whistle-blowing mechanisms. Our findings indicate that 67% of the IAMs' organisations here have already implemented whistle-blowing mechanisms. These organisations have involved their IADs extensively in the implementation of the whistle-blowing mechanisms. The ACM and MGT respondents in our study perceive their IADs to possess the necessary skills, knowledge and independence to implement whistle-blowing mechanisms.

Both of the aforementioned Sarbanes-Oxley requirements are meant to strengthen the corporate governance in listed companies. With the strong favourable support of organisations in Singapore, there are ample opportunities for internal auditors

to assist their organisations in these two areas. On their part, the IADs must be prepared and ready to take on these value-adding services.

- *Internal auditors' interactions with external auditors*

Both the internal and external auditors play an important governance role. Often, both of these groups share similar concerns and the work performed by one group is of relevance and interest to the other group. Surprisingly, the IAMs' involvement in the external audit process is rather low. Nevertheless, the IAMs perceive that their IADs' interactions with the external auditors have resulted in benefits for both their IAD and organisation. Moreover, the ACM and MGT respondents also consider assisting the external auditors to be an important area that IADs should devote their time and resources. These findings suggest that there is ample room for greater interactions between the internal and external auditors. As an organisation's operations and complexity increase, it will become increasingly more difficult for an IA function to effectively monitor the organisation's various activities. Encouraging greater co-operation and coordination between the internal and external auditors can potentially create synergies in both parties' efforts to ensure proper and effective corporate governance in the organisations.

- *Availability of IT audit specialists*

It appears that recruiting and retaining IT audit specialists remain a major challenge for IADs. The availability of IT audit specialists in IADs have not changed substantially since 1996. Sixty-two percent of the IADs have no IT audit specialist and only 40% of the IADs have one or more IA staff with the CISA qualification. Many of the IADs, however, are involved in appraising the organisation's information and internal control systems (94%) and reviewing the organisation's IT and information security (79%). Moreover, the IAM, ACM and MGT respondents consider IS/IT auditing as an important area for their IADs, and in-house IA functions are more involved in reviewing the organisation's IT and information security, data privacy issues and protection mechanisms than out-sourced IA functions. With the increased adoption of, and rapid changes in, information technology, the problem of the lack the IT audit specialists in IADs will only become more acute and a bigger threat to the effectiveness of the IA function, particularly for the in-house IA functions. This problem is reflected in the finding that half of the IAMs consider the lack of IT audit skills to be a significant problem currently faced by their IAD. A midterm solution for organisations is to outsource their IT-related IA activities. Another approach is to recruit graduates from the IT/IS discipline and provide them with the necessary training and support to work as internal auditors. In the longer term, the local tertiary institutions could develop relevant IT audit courses to meet the demand for IT audit specialists.

- *Maintaining the independence and objectivity of internal auditors*

The Code of Corporate Governance 2005 recommends that internal auditors' primary line of reporting should be to the Chairman of the AC (although internal auditors may also report *administratively* to the CEO). A main rationale for this recommendation is to maintain and enhance internal auditors' independence and objectivity when discharging their IA functions. We find that while 77% of the IADs report functionally to the AC only, 8% report functionally to both the AC and CEO/CFO and another 6% report functionally to only the CEO/CFO. In addition, 24% of the organisations' AC are not comprised of solely non-executive directors and 12% of the ACs do not have independent directors as the majority of their members, as recommended by the Code of Corporate Governance. Furthermore, the ACs met with the internal auditors five times a year on average but only one of these meetings is in the absence of management. In fact, 35% of the ACs did not meet with their internal auditors in the absence of management at all. The strength of an organisation's AC and its relationship and interactions with the internal auditors could significantly affect the latter's independence and effectiveness.

Additionally, the IAM respondents consider their IAD to play both assurance and consulting roles in their organisation. This could lead to a conflict of interests if internal auditors take on both consulting and assurance roles for the same subject matter over time. Further, our findings also reveal that 56% and 13% of the IAMs (46% and 12% of the IAS) receive compensation based on their organisation's financial performance and share price respectively and 25% of the IAMs (19% of the IAS) own shares in their organisations. The internal auditors' economic interests could also potentially hinder their independence and objectivity.

On a more positive note, the IAMs perceive themselves as having the freedom to report management malpractices and problems without jeopardising their position. Nevertheless, the Board of Directors should periodically review potential threats to internal auditors' independence and objectivity to ensure that the effectiveness of the IA function is not compromised. Another useful measure to guard against such threats is to conduct periodic external quality assessments.

- *Ensuring and monitoring the effectiveness of the IA function*

In most organisations, the responsibilities of ensuring and monitoring the effectiveness of the IA function lie with the AC, consistent with the recommendation of the Code of Corporate Governance 2005. Thus, it is critical that the ACs possess the necessary skills and knowledge to monitor the IA activities. Our findings reveal that a substantial proportion of the ACs in the IAMs' organisations does not meet the Code's recommendation of having at least two AC members who have accounting or related financial management expertise or experience. This can potentially weaken the AC's ability to monitor the quality of financial-related IA activities. Our findings indicate that the IAMs rated financial auditing as an important service provided by their IAD and many IADs (65%) are involved in appraising financial reporting information. We also observe that the ACs' involvement in reviewing and approving of IA budgets and staffing

matters is limited. However, IA budgets and staffing matters are critical aspects that bear directly on the quality and effectiveness of an IA function. Thus, increasing the ACs' level of financial expertise and attention to IA budget and staffing matters would further enhance their effectiveness in ensuring and monitoring the quality of IA function.

Currently, only 13% (31%) of the surveyed IADs have undergone an external (internal) quality assessment in the past five years and, surprisingly, a significant proportion of IAMs (42%) is indifferent or opposed to having an external quality assessment, with many citing costs, little benefits and lack of organisational support as the main reasons for the lack of interest. It is important that the Board of Directors and the AC in particular recognise the importance of periodic quality assessments. The IAS needs to promote the awareness and benefits of regular quality assessments to both IA professionals as well as the management of their organisations. For instance, the IIA Research Foundation could sponsor research to investigate the effects of internal and/or external quality assessments on the effectiveness of internal auditors' performance. This would provide useful evidence to enable organisations to better appreciate the benefits of such an assessment and hence leading to greater organisational support.

- *Role of Accountancy programmes in local tertiary institutions*

A significant proportion of the IAMs and IAS studied Accountancy in local tertiary institutions. Accountancy is also considered by ACMs, CEOs and CFOs as the most preferred academic discipline for IA staff. This suggests that the Accountancy programmes of local tertiary institutions play an important role in the education and supply of future internal auditors in Singapore. Thus, the IAS could work closely with local tertiary institutions to ensure that important concepts and skills required by an effective IA professional are built into the relevant courses of their Accountancy programmes. The IAS could also raise the awareness amongst students of the significance and career prospects of the IA profession through various talks and seminars, as well as through more aggressive promotion of its student member category that has been in place for a number of years.

- *Public awareness and recognition of the IA profession*

In terms of membership drive, the IAS has been quite successful in the past decade in attracting new members, with a current membership of over 1,300. In the current study, 85% of the IAMs are members of the IAS, up from 70% in the 1996 study. Among the IAS, 49% are members of the IAS. This provides strong affirmation of the role and relevance of the IAS to the IA profession in Singapore. In terms of promoting public awareness and recognition of the IA profession in Singapore in the past decade, the IAM respondents in our study perceive the IAS to be only moderately successful and believe that the IAS needs a more effective strategy to further advance the IA profession in Singapore. Interestingly, 42% of the ACM and MGT respondents indicate that this study is their first exposure to the IAS and the respondents' familiarity with the IAS is generally not high. In

addition, our findings reveal that 16% of the surveyed listed companies currently do not have an IA function and are only moderately likely to establish one in the next three to five years. Thus, there is ample room for the IAS to further improve the public awareness and recognition of the IA profession in Singapore. For example, the IAS could consider lobbying regulators to make it mandatory for companies with a total annual revenue above a certain threshold to establish an IA function, whether an in-house or outsourced one. In addition, the IAS could consider pushing for mandatory professional membership and qualifications of internal auditors practising in Singapore. Last but not least, the IAS could increase the visibility of the profession by actively disseminating its views on various corporate governance issues via the public media and by commissioning more regular studies on matters affecting the IA profession, such as the current study.

5.2 Limitations and Recommendations for Future Research

This study has several limitations. First, the response rates for the various respondent groups are low. Consequently, the findings of our study may not be representative of the views of our targeted populations. Second, we surveyed ACMs, CEOs and CFOs of organisations listed on the Singapore Exchange. Thus, our findings pertaining to these respondents may not apply to IA functions in non-listed organisations. Future studies can examine the differences in the profiles, functions and perceptions of internal auditors and their departments in non-listed vs. listed organisations.

Lastly, our ability to identify potential associations between the views of different respondents from the same organisation is limited because of respondent anonymity. Future research can explore potentially interesting associations among the views pertaining to IA functions elicited from various parties from the same organisation. For example, do any specific characteristics or practices of an organisation's IA function, or the nature and extent of interactions between an organisation's IAD and its audit committee and external auditors, affect the perceived effectiveness of the IA function by the organisation's management, audit committee members or external auditors? Future research can also provide further evidence on other potential implications of the findings reported here, such as whether differences in the scope of IA services provided by IADs or the level support for professional development activities by the management could lead to differences in the work commitment and turnover behaviours of internal auditors.

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Institute of Internal Auditors Singapore

10 Anson Road
#10-13A International Plaza
Singapore 079903
Telephone: +65 6324 9029
Facsimile: +65 6220 5972
Website: www.iaa.org.sg

Nanyang Business School

Nanyang Technological University
Nanyang Avenue
Singapore 639798
Telephone: +65 6790 4865/4894/6016
Facsimile: +65 6792 4217
Website: www.nbs.ntu.edu.sg

Singapore Institute of Directors

3 Shenton Way
#15-08 Shenton House
Singapore 068805
Telephone: +65 6227 2838
Facsimile: +65 6227 9186
Website: www.sid.org.sg