

Driving Audit Quality: Designing Next-Generation Audit Quality Indicators



2025

EXECUTIVE SUMMARY

This report, published in conjunction with the 10th anniversary of ACRA's Audit Quality Indicators Disclosure Framework ("Framework"), presents ACRA's comprehensive review conducted in 2025 on the Framework. It incorporates insights from its study of the linkage between certain engagement-level metrics and internal/external review outcomes, feedback obtained from stakeholders such as audit committees, and research on international developments. The review introduces three new indicators (use of technology, culture survey, and restatements) and updates an existing indicator (audit hours) to address emerging risks and evolving stakeholder expectations.

ACKNOWLEDGEMENTS

ACRA would like to express our gratitude to Professor Themis Suwardy (Singapore Management University), the audit committee focus group participants, and the audit committee survey respondents for their invaluable contributions to this publication.



INTRODUCTION

Audit Quality Indicators (AQIs)

Audit Quality Indicators (“AQIs”) are one of several tools used to assess audit quality. These indicators encompass various dimensions of the audit firms’ System of Quality Management (SoQM) and the audit process specific to audit engagements. AQIs include both **quantitative and qualitative measures** that provide valuable insights into the factors influencing audit quality, including identifying trends and potential areas of concern.

ACRA took the lead and launched the AQI Disclosure Framework (“Framework”) in 2015, aiming to support Audit Committees (“ACs”) of listed companies in monitoring and assessing audit quality. Since its implementation, ACRA has noted that ACs, various government agencies and regulators involved in the appointment/reappointment of auditors use the Framework in selecting auditors and evaluating the quality of the audit work performed. In addition, audit firms employ these metrics to identify potential weaknesses in their SoQM, which enables proactive quality management.

Many jurisdictions have also recognised that AQIs help stakeholders make informed decisions and improve audit quality. Although the details in each jurisdiction’s framework vary, all of us share the same common goal of upholding audit quality.

AQI – Continuous Improvement Journey

In response to the evolving auditing landscape and the passage of time, ACRA conducted a comprehensive review of the Framework. This 2025 review covered the following:



Applying insights gathered on the association between engagement-level metrics and audit quality



Considering feedback obtained from users of the Framework



Study on international developments to gain an understanding of the projects prioritised by international standards setters and assess how our Framework compares with those developed by overseas audit oversight bodies



QUICK
TIP

Request your auditors for relevant narratives/commentaries to explain changes and trends in AQIs



STUDY ON AUDIT ENGAGEMENT REVIEWS

ACRA's study covered the following:



Over
500 audit engagements



Selected for the audit firms' internal quality review or ACRA Practice Monitoring Programme from 2020 to 2024



16 audit firms in Singapore that have listed companies in their audit portfolio

The data collated for each reviewed audit engagement includes:



Resources (Human Talent)

- Time spent by audit engagement team members across staff grades, over the various audit phases such as planning, fieldwork, completion, etc.
- Total budgeted hours
- Training hours of the audit engagement team members



Relevant Experience and Years of Association

- Years of audit experience of senior audit team members
- Years of association of senior audit team members with the audited entity
- Number of years the audit firm has been the auditor of the entity



Resources

- Whether technological tools have been deployed on the audit engagement



Review Outcomes

Classified into two overarching categories: "Satisfactory" and "Unsatisfactory"



QUICK TIP

Engage with your auditors about AQIs early in the audit process, to maximize the impact on the audit performed

“
As ACs, we have to ask questions and understand the AQI data.

-Focus group participant

Insights from audit engagement reviews

Proportion of planning hours to total engagement hours

Based on the data collated, 20% appears to be a differentiating factor where out of the audit engagements with at least 20% of time set aside for planning activities, only 3% had “Unsatisfactory” outcomes. Conversely, for audit engagements with less than 20% of their time set aside for planning activities, 19% had “Unsatisfactory” outcomes. The likelihood of an “Unsatisfactory” outcome is 6.3 times higher when less than 20% of time is set aside for planning activities.

This underscores the importance of allocating sufficient time for audit planning activities to ensure that an effective audit strategy has been formulated to address the risk of material misstatements.

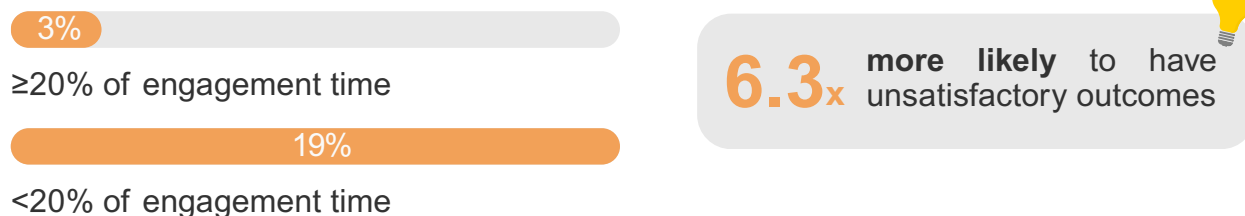


Figure 1: Percentage of “Unsatisfactory” audit engagement review outcomes by proportion of planning hours



Proportion of engagement partner’s hours to total engagement hours

In audit engagements where the engagement partner's hours account for at least 10% of the total engagement hours, 6% resulted in “Unsatisfactory” outcomes. By contrast, when the engagement partner’s hours fall below 10% of the total hours, 14% had “Unsatisfactory” outcomes. The likelihood of an “Unsatisfactory” outcome is 2.3 times higher when the engagement partner’s hours are below 10%.

This emphasises the importance of sufficient oversight from the engagement partner to drive high quality audits.

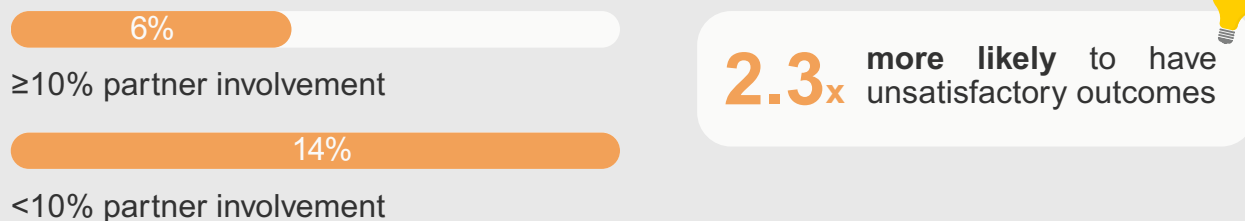


Figure 2: Percentage of “Unsatisfactory” audit engagement review outcomes by proportion of engagement partner hours out of total engagement hours



QUICK TIP
Leverage AQIs to initiate deeper discussions with your auditors on their plans for a quality audit.



Engagement partner's tenure on the audit engagement

ACRA noted a trend of unsatisfactory outcomes for audit engagements led by partners with less than two years' tenure and more than five years of tenure. In both these segments, the "Unsatisfactory" outcome rates were at 14% and 16% respectively, as compared to 8% for those within two to five years of tenure.

This highlights the need to balance the engagement partner's understanding of the audit client against potential familiarity threats arising from long association with the entity.

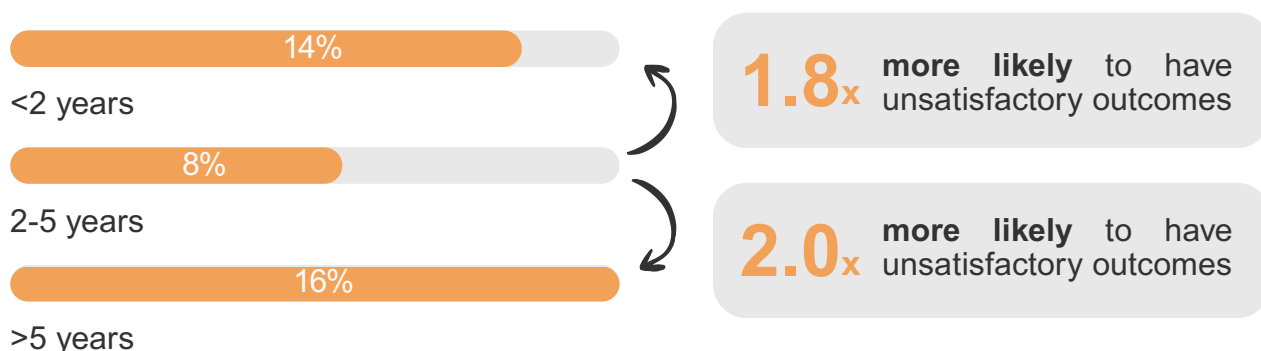


Figure 3: Percentage of "Unsatisfactory" audit engagement review outcomes by tenure of engagement partner on the audit engagement



Use of Technological Tools

Technological tools include data analytics, artificial intelligence, robotic process automation, and blockchain-related tools.

In audit engagements that deployed technological tools, 10% had "Unsatisfactory" outcomes. Conversely, 23% of audits conducted without the use of technological tools were classified as "Unsatisfactory". It shows that an engagement has a 2.3 times higher chance of an "Unsatisfactory" outcome when technological tools are not incorporated into the audit process.

This highlights that the use of technological tools can have a substantive impact on audit quality. ACRA strongly encourages audit firms to leverage digital solutions, such as artificial intelligence, data analytics, robotic process automation or blockchain-related tools, to enhance audit quality. As these advanced technologies become increasingly prevalent, audit firms are expected to keep pace with these advancements to ensure that their audit procedures remain robust, efficient and capable of addressing emerging risks.

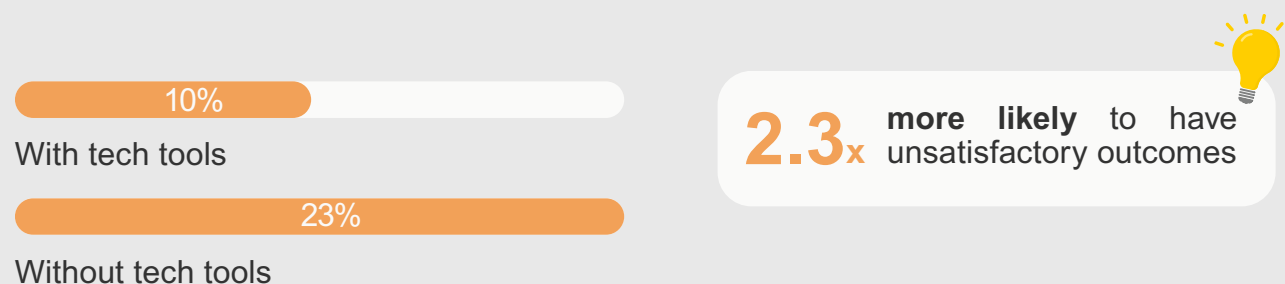


Figure 4: Percentage of "Unsatisfactory" audit engagement review outcomes by deployment of technological tools



ENGAGING USERS OF THE FRAMEWORK

Feedback from online survey

In January 2025, ACRA conducted an online survey to collate feedback from ACs on the practical application and perception of the Framework.

Insights from AC surveys

Amongst the 92 respondents, 83% were aware of the Framework and have considered the recommended AQIs when measuring and evaluating audit quality.

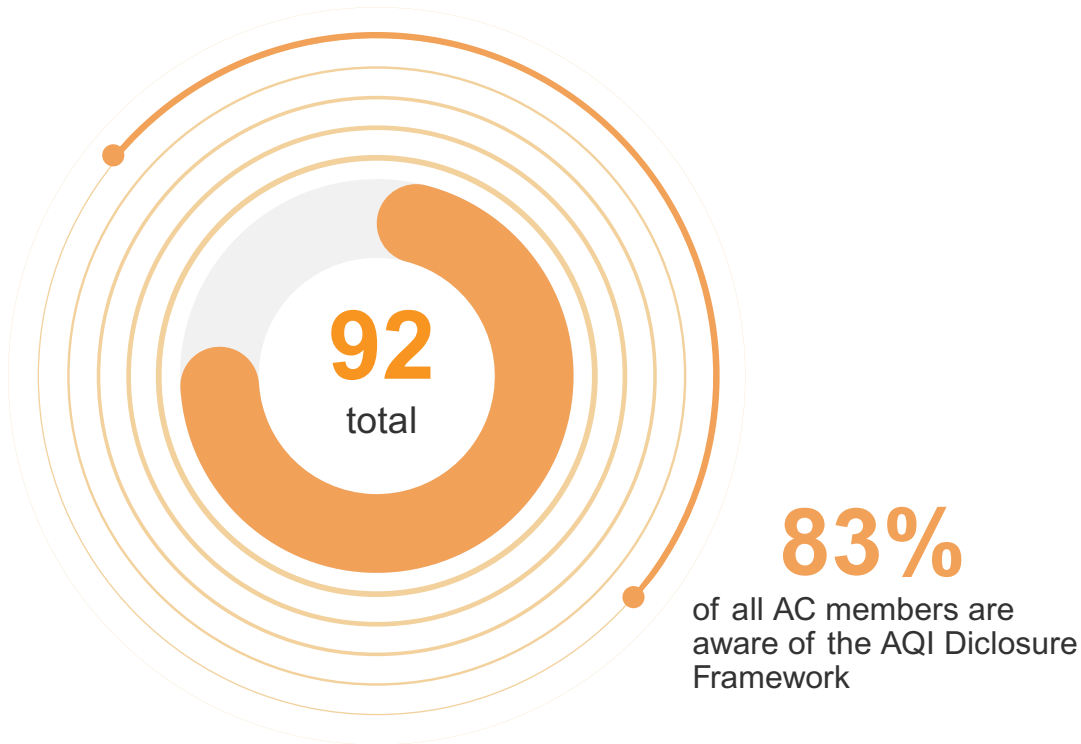


Figure 5 highlights the areas where ACs most commonly use the Framework. AQIs have been used by ACs, mainly for appointing/reappointing auditors, and to engage external auditors in discussions on audit quality during both the audit planning and completion phases.

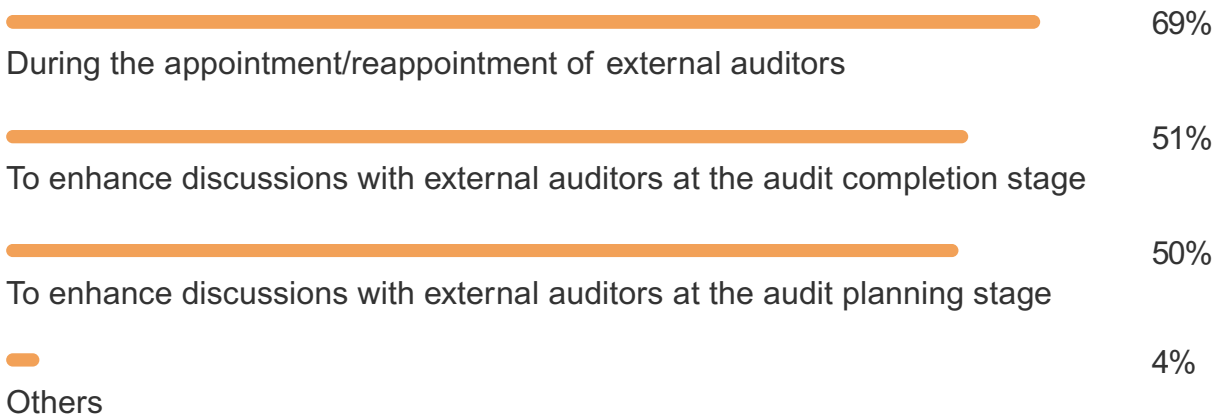


Figure 5: Areas where AQIs are being considered [multiple choices allowed]

Figure 6 details the AQIs that ACs have noted to be most relevant to the measurement and evaluation of audit quality. It highlights that ACs use various metrics either individually or collectively to fulfil their responsibilities as those charged with governance. ACs make significant use of the engagement-level metrics such as the audit engagement team's experience and the hours expended during an audit; as well as firm-level indicators, such as staff oversight, inspection outcomes, and headcount in quality control functions.



Figure 6: AQIs that are most relevant for measurement and evaluation of audit quality [multiple choices were allowed]

Feedback from focus group discussion

Following the survey, 12 respondents (a cross-section of audit practitioners and company directors) were invited to participate in a focus group discussion for ACRA to gather feedback on the insights from audit engagement reviews, as well as to consider potential changes to the current Framework.

Insights from focus group discussion

The participants highlighted their varied experiences when using the Framework. The general feedback was that not all ACs are familiar with the current Framework, and that some audit firms provide AQI information either only upon request, or only at the completion of the audit, thereby limiting the usefulness of the AQIs. In addition, AQI information is sometimes provided without sufficient disaggregation.

When asked for suggestions on new indicators to potentially be incorporated into the Framework, the participants opined that the usage of technological tools by audit engagement teams should be included due to the adoption of technology fast gaining traction amongst the audit firms. ACRA noted that this suggestion is consistent with insights

from engagement reviews, where the usage of technological tools can have a substantive impact on audit quality. However, ACs were also cognizant that small audit firms may not have the required means to adopt technology and suggested providing funding and advisory support to these firms to encourage the use of these tools.

ACRA noted that several audit firms have “restatements” as an internal monitoring indicator and sought feedback from ACs on whether such an indicator would be useful to incorporate into the Framework. The participants expressed support for the inclusion of restatements due to errors as an indicator, as they felt that it is useful to signal potential audit quality issues or weaknesses in the audit firms' SoQM. They also stressed that auditors should clarify the qualitative aspects of this metric to ACs, as restatements can result from factors unrelated to audit quality, such as inheriting audits from predecessor firms.



STUDY ON INTERNATIONAL DEVELOPMENTS

Following the introduction of ACRA's Framework in 2015, numerous international audit oversight bodies have established their own AQI frameworks. Our jurisdictional study confirms that both the existing and newly added indicators in ACRA's Framework are consistent with those adopted in other countries. Further information on the indicators in ACRA's Framework which are also adopted by these audit oversight bodies can be found in Annex A.

This alignment reflects the global recognition of AQIs as a valuable tool for enhancing audit quality. In reviewing international developments, we also noted that the International Ethics Standards Board for Accountants (“IESBA”) is undertaking a project to develop a culture and governance framework that promotes, supports, and reinforces high ethical standards within the audit profession. This demonstrates that not only are the technical aspects of audit quality important, but that sustainable high audit quality is fundamentally shaped by an audit firm's culture and tone set by its leadership. Measuring an audit firm's culture is, therefore, essential to ensuring that audit objectives are consistently achieved across all audit engagements.

UPDATES TO ACRA'S AQI DISCLOSURE FRAMEWORK

Building on the insights gathered from the survey and feedback sessions, as well as our study on international developments, we are introducing three new indicators, and updating an existing indicator to address emerging risks and evolving stakeholder expectations.

Introduction of new AQIs

The three new indicators are:

- (i) **Use of technology** – which focuses on technology utilisation in audit execution;
- (ii) **Culture survey** – which focuses on audit firms' culture and tone at the top;
- (iii) **Restatements** – which focuses on the effectiveness of the audit firm's SoQM in preventing/detecting audit deficiencies resulting in financial statement misstatements.

All three new indicators introduced by ACRA comprise firm-level elements. Whilst engagement-level indicators are directly related to the performance of the audit engagement team, it is important to note that firm-level indicators (capturing systemic quality controls and culture that affect all audits) are equally important as they provide insights on the audit firm's commitment towards audit quality. Accordingly, these AQIs can provide users with more insights on the audit firms' SoQM, in line with the Singapore Standards of Quality Management requiring audit firms to design, implement and operate a SoQM for audit engagements, to proactively manage the quality of executed audits.

By incorporating these new indicators alongside the existing indicators in the Framework, we aim to provide users of AQIs with a more comprehensive perspective on audit quality.



USE OF TECHNOLOGY



Firm Engagement

Definition

This AQI evaluates the degree to which audit teams deploy digital solutions to improve audit quality outcomes, focusing on digital tools used by audit engagement teams to examine, sort, filter, or analyse transactions which will be used as audit evidence or which generate results that supplement the audit engagement team's judgement.

At the audit firm level, this AQI is represented by the following:

(a) Percentage of public interest entity audits that have adopted at least one automated tool and technique (ATT)

(b) Percentage of audit engagements (i.e., both public interest entities and non-public interest entities) that have adopted at least one ATT

At the audit engagement level, this AQI is represented by the following:

To provide a description of how ATTs have been incorporated into the various audit areas, and the related financial statement captions.

Example of audit areas: risk assessment, test of controls, test of details, substantive analytical procedures, journal entries testing, information technology general controls/ information technology application controls, reporting and disclosures, etc.

Relevance

Technology enables audit engagement teams to analyse entire populations of data, rather than rely on a sampling approach, thereby leading to the performance of more targeted and risk-focused audit procedures, which contributes to overall audit effectiveness. This AQI measures both the breadth of technology adoption across the various audit areas, as well as the extent of audit engagements that have adopted at least one type of technological tool.

Given that stakeholders such as ACs and investors increasingly expect audit engagement teams to leverage available technology to enhance audit quality, this indicator demonstrates whether audit firms are keeping pace with technological advancement and meeting those evolving expectations.



CULTURE SURVEY



Firm

Definition

This AQI evaluates the behavioural foundations of audit quality by measuring audit staff's perceptions of leadership teams' commitment to quality, ethical standards, professional development support and firms' emphasis on audit excellence.

This AQI is represented by the following:

Audit engagement teams' responses to the audit firm's people/culture survey questions

We strongly encourage the inclusion of survey questions on the following categories:
(i) Ethical behaviour (ii) Resources to ensure audit quality (iii) Culture of trust

Relevance

This AQI measures how effectively the audit firm's stated quality commitments are embedded in day-to-day practice and decision-making. Culture and leadership shape how audit engagement teams exercise professional scepticism, make judgements under pressure, and prioritise audit quality over efficiency or commercial considerations.

Given the increasing recognition that sustainable audit quality depends on the audit firm's culture rather than just technical competence, this indicator demonstrates whether audit firms' quality initiatives are embraced.



RESTATEMENTS



Firm

Definition

This AQI evaluates audit effectiveness by measuring the frequency of restatements of previously issued financial statements, which suggests that the audit engagement team failed to detect material misstatements.

This AQI is represented by the following:

Number and percentage of statutory audits wherein a material misstatement was found in the financial statements from a previous financial year, thereby resulting in a restatement (excluding audits that were performed by another public accounting entity in the previous financial year)

Relevance

The AQI provides a direct quantification of audit quality by measuring how frequently the audited financial statements, across the audit firm's audit client portfolio, require subsequent correction.

Given that the frequency of restatements reflects how well the firm's SoQM, review processes and consultation mechanisms are functioning, this indicator helps stakeholders better understand these quality-related risks.

While the number of restatements provides a quantitative measure of audit quality, it is equally important for ACs to understand the underlying reasons for each restatement. This qualitative analysis enables ACs to assess whether the restatement stems from areas involving judgement or potential deficiencies in audit procedures, etc, thereby reflecting on the performance of both the audit engagement team and management.

Updates to existing AQIs

In addition to introducing new AQIs, we are refining one existing indicator in the Framework to enhance its effectiveness and relevance. This update to the Audit Hours indicator adds the presentation of hours incurred before and after the audit client's financial year end.



AUDIT HOURS



Engagement

Definition

This AQI highlights the number of hours spent by the audit engagement team during each audit phase, before and after the audit client's financial year end. It also shows how the total actual hours incurred by the audit engagement team compare with the total budgeted hours.

This AQI is presented in absolute and relative terms to reflect the following:

This AQI is presented in absolute and relative terms to reflect the following:

- (a) Hours incurred before and after the audit client's financial year end
- (b) Total budgeted and actual hours incurred by audit team composition
- (c) Hours and % of hours incurred by audit team members in each audit phase

Relevance

This AQI indicates the extent and timeliness of involvement of audit and other team members in an audit during the various audit phases, before and after the audit client's financial year end. The disclosure of time spent by audit phases would help facilitate the tracking of audit milestones and improve coordination between the auditor and auditee throughout the audit process (e.g., ensuring working papers are provided to the auditor on time and for audit issues to be identified earlier).

Audit quality is likely to increase with timely and higher levels of involvement by senior audit team members as they have the requisite knowledge and experience to identify and resolve audit issues early during the audit process. A higher level of involvement in a timely manner would also imply more supervision and review of the work performed by junior or less experienced audit team members, which may help prevent any surprises.



Visit ACRA's AQI page using the QR code for the latest disclosure guidance and firm-level industry benchmarks

“

The more you publish, the more we learn actually.

-Focus group participant

”

ANNEX A

OVERSEAS AUDIT BODIES WITH SIMILAR INDICATORS/ METRICS

Indicator in ACRA's AQI Disclosure Framework		UK Financial Reporting Council	Audit Oversight Board, Malaysia	Independent Regulatory Board for Auditors, South Africa	Federal Audit Oversight Authority, Switzerland	Financial Supervisory Commission, Chinese Taipei
NEW	Use of technology					
	Culture survey	✓				
	Restatements					
EXISTING	Audit hours	✓		✓	✓	✓
	Experience			✓		✓
	Training	✓	✓	✓	✓	✓
	Inspections	✓	✓	✓		✓
	Quality control		✓			✓
	Staff oversight	✓	✓	✓	✓	
	Attrition rate	✓	✓	✓	✓	✓



About Accounting and Corporate Regulatory Authority

The Accounting and Corporate Regulatory Authority (ACRA) fosters a vibrant and trusted business environment that enables innovation and growth, contributing towards making Singapore the best place for business.

ACRA regulates the registration of businesses, and their financial and other reporting obligations. We also oversee the public accountancy and corporate service provider sectors. ACRA plays a critical role in developing the accountancy profession, and sets accounting standards for companies and various other entities in Singapore.

For more information, please visit www.acra.gov.sg

Copyright © 2025 All rights reserved. Accounting And Corporate Regulatory Authority
This document is the exclusive property of the Accounting And Corporate Regulatory Authority.
Any revision, use, duplication or commercial distribution of this work is permitted only with the consent of the Accounting And Corporate Regulatory Authority.

