

## RESEARCH ARTICLE

# Improving Audit Quality with Risk-Based Approach and Quality of Independent Audit Using the Structure Equation Modeling Evidence West Sumatra

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**ABSTRACT** - This research assesses the enhancement of audit quality through the application of a risk-based approach (RBA), taking into account the factors influencing the adoption of RBA and the quality of independent audit in West Sumatra. The quantitative research design was employed by utilizing a descriptive survey approach. The research sample was determined via purposive sampling, whereby 42 auditors completed the survey questionnaire. Structural Equation Modeling (SEM) was employed to analyze the data. The results revealed a negative relationship between auditor job pressure, the audit company's competitive capability, audit expenses, client risk, and the implementation of RBA with independent audit quality. A positive relationship exists between auditor capacity and independent audit quality, without influencing RBA. Meanwhile, information technology support for RBA exhibits a negative relationship with independent audit quality. Such results agree with previous findings, particularly concerning audit costs, the role of information technology in audits, and client risk. This research offers recommendations for a comprehensive understanding of the implementation of RBA and the quality of internal controls a means to enhance audit quality.

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*Risk Management*  
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## 1. INTRODUCTION

Effective risk management has emerged as a crucial element in achieving organizational success by facilitating the identification, assessment, and mitigation of potential threats, while also capitalizing on opportunities that stem from uncertainty. In response to this requirement, risk management frameworks have been developed to assist organizations in effective risk management (Efe, 2023). One crucial strategy in implementing the management system is utilizing a risk-based approach (RBA) in accordance with standard requirements to mitigate adverse effects and reduce costs (Ispas et al., 2023). Implementation of techniques and procedures aligns with the chosen audit approach, demonstrating competence and enhancing quality. The traditional approach to detecting financial fraud in publicly listed companies involves manual examination of financial statements, which relies on expert subjective judgment. Traditional audits emphasize adherence to regulations and procedures, and their recommendations may not furnish adequate insights on attaining organizational objectives (Le et al., 2022; Naibe, 2014; Wu et al., 2022).

Audit firms can alleviate the risk-averse tendencies of auditors by proactively addressing litigation risks and incentivizing auditors to engage with new client companies, ultimately guaranteeing audit quality for new clients. The adoption of a risk-based approach in auditing is contingent upon the auditor's capacity to identify and assess all risks associated with economic activities within their knowledge, followed by the identification of risks within this set. In specific situations, it is customary to exercise professional judgment when singling out significant risks from the entire array of risks identified during the final stage of assessing and analyzing financial statements (Kzykeyeva, 2022; Qi & Yuan, 2023). Auditors within companies are adapting to recent advancements in accounting and auditing, restricted access to relevant materials, coupled with financial constraints that hinder participation in training programs (Le & Nguyen, 2020). The impact of risk-based approach varies among audit firms, particularly in smaller firms and developing nations, with limited empirical evidence. While its effectiveness is supported, factors influencing audit performance lack research, especially in smaller firms and developing nations. Another set of issues frequently neglected in academic literature pertains to the activities and practices of small and medium-sized audit firms, as the majority of existing literature primarily centers around the Big-4 (large firms) (Le et al., 2022; Naibe, 2014; Kutum et al., 2015).

Indonesia adheres to the regulatory guidelines outlined in POJK Number 12/POJK.01/2017, which pertain to the Implementation of the APU PPT Program in the Financial Services Sector (POJK APU PPT). Article 4 mandates PJK to implement APU and PPT programs to manage and mitigate identified risks as per Article 2 and this regulation. Presidential Regulation No. 5 of 2021 adopts risk-based business licensing via OSS-RBA based on risk levels. The licensing procedure comprises seven sections and is governed by Government Regulation (PP) Number 24 of 2018, which addresses Electronically Integrated Business Licensing Services. The legal framework for public accountants in Indonesia comprises Law Number 5 of 2011 concerning Public Accountants (UU AP), Government Regulation Number 20 of 2015

governing Public Accountant Practices (PP AP), and Minister of Finance Regulation Number 186/PMK.01/2021 addressing the Development and Supervision of Public Accountants (PMK 186/2021). PMK 186/2021 delegates oversight of AP, KAP, and branches to PPPK, regulating compliance with AP Law, implementing regulations, and SPAP. Regulations in Indonesia encompass various aspects, including those related to services and trade. Indonesian Public Accounting Firms (KAP) employ RBA when conducting audits of financial reports, in compliance with Auditing Standards (SA) that mandate auditors to utilize a risk-based approach. This is stipulated in Minister of Finance Regulation Number 186/PMK.01/2021, which emphasizes on independence, mitigating conflicts, and using RBA in West Sumatra.

Information technology has profoundly changed professional fields, finance, auditing, and accounting. Audit technology factors include cost-benefit, competition, readiness, and alignment, while focusing on financial statement areas with potential distortion risks (Afsay et al., 2023; Kzykeyeva, 2022; Wu et al., 2022). Reports must adhere to IAS and undergo external audit for accuracy in representing financial position. Audit fees consider key factors indicating the credibility of financial reports (Kanakriyah, 2020). Risk is inherent in human activities with limited resources and uncertainty, which impacts business objectives. Audit firms improve service and risk management by assimilating knowledge about risk control (Zhemchugovaa et al., 2022; Levytska et al., 2022; Qi & Yuan, 2023). Enhanced compensation and risk mitigation in audit firms contribute to advancing audit quality theory and research. Further research, such as the work conducted by Qi & Yuan (2023) and Le et al. (2022) on the factors influencing financial statement audit performance through a risk-based approach, is necessary to broaden the applicability of research outcomes.

This research aims to assess audit quality improvement through the implementation of a risk-based approach by considering the factors influencing the implementation of RBA and the quality of independent audit evidence in West Sumatra. It involves exploring the relationship between RBA and companies, risk-based implementation, and the quality of independent audits. The investigation shall provide insights into (1) whether conducting audits using the risk-based approach will affect the quality of audit independence, and (2) the specific factors influencing the risk-based approach, with a particular focus on West Sumatra.

## 2. LITERATURE REVIEW

### 2.1 Risk Management

Risk management involves the process of identifying, assessing, and managing risks, which allows organizations to address risks according to priority based on their severity in the context of risk appetite. Companies that implement effective risk management will handle various types of risks in a coordinated manner, rather than separately as per conventional risk management. Risk is inherently characterized by three specific principles: (1) it is partially unknown, (2) it is variable over a while, and (3) it is changed by human action (Alazzabi et al., 2023; Kalina et al., 2022; Taherdoost, 2021). There are four main risks: (1) strategic risks, which refer to decisions or business events that prevent the organization from achieving its goals; (2) financial risks, which refer to potential financial losses for the organization; (3) operational risks, which describe the processes, system failures, or events that disrupt daily business operations; and (4) compliance risk, which refer to potential exposure due to violations of laws, regulations, and other standards (Wang et al., 2023).

Based on the ISO 9001 standard, specific risks are divided into several parts: (i) Organizational context, in which the organization must define organizational processes (risks and opportunities); (2) Leadership, which highlights top management responsibilities and team actions; (3) Planning, which pertains to identifying risks and opportunities; (4) Support, which provides the necessary resources to conduct planned actions (risk action plan); (5) Operations, whereby the organization must manage operational processes and related risks (risks and opportunities); (6) Performance evaluation, which involves monitoring, analyzing, and evaluating the effectiveness of actions taken to overcome risks; (6) Improvement, which involves continuous improvement by correcting and preventing or reducing undesirable impacts and updating risks (threats and opportunities). A risk-based approach requires planning and implementing risk management measures (Martins, 2022; Ispas et al., 2023). Audits will involve more discussions with managers about risks and their responses to those risks. The primary duties include determining processes and objectives, identifying risks that hinder the process, mitigating risks, reporting when risks are not sufficiently mitigated by controls, and assuring the management that risks have been mitigated to an acceptable level. Risk management is based on a planned, logistical, comprehensive, and documented strategy. Through RBA, audit activities provide useful and relevant information for the organization to manage its risks (Apreku-Djan et al., 2022). Internal audit focuses on business process analysis and control systems. The simplified approach involves listing processes and identifying risk factors, while the sole risk factor is failure to achieve process objectives. However, the current internal control system lacks risk management evaluation capability (Levytska et al., 2022). Auditors opt for smaller samples in a risk-based approach upon considering audit risk management, anticipated risks, and materiality (Sardasht & Rashedi, 2018). When incorporating risk-based management in a security system, the management function is to plan security measures through risk management mechanisms, identify risks and their analysis and evaluation, determine their maturity level, and choose one of the many management solutions (Alazzabi et al., 2023; Kalina et al., 2022).

## 2.2 Audit Quality

Audit quality is defined as the market-assessed probability of an auditor to detect and report a breach in a client's accounting system. The probability of an auditor to detect misstatements depends on various factors, including the efficient utilization of appropriate resources throughout the audit process (inputs and procedures). It is also tied to their ability, independence from the client, and contextual factors (DeAngelo, 1981). The Generally Accepted Accounting Principles (GAAS) aims to reasonably assure adherence to two main objectives in audited financial statements and accompanying disclosures: (1) conformity with GAAP, and (2) accuracy regardless of the origin, be it fraud or error (Samagaio & Felício, 2022).

According to the International Auditing and Assurance Standards Board (IAASB, 2009), auditors have two main objectives:

- i) GAAS seeks substantial assurance in financial statements' accuracy, whether from errors or fraud, and opines on compliance with the reporting framework; and
- ii) This section outlines the report on the financial statements and their outcomes.

The determinants of audit quality serve as the focus of accounting literature because quality audits provide credibility to financial reports and increase investor confidence. The high quality of audit results can affect the image of the Public Accounting Firm (PAF) concerned, where audit quality consists of the clarity of information from the audit results done by the auditor on the client's financial statements based on applicable audit standards (Lo et al., 2022; Nurbaiti & Sabilla, 2022).

## 2.3 Audit Approach

The business risk audit approach systematically addresses critical company areas throughout various audit phases, from planning to conclusion. Auditors emphasize entity-level financial reports and risks to improve audit procedure selection and resource allocation efficiency while avoiding excessive scrutiny (Le & Nguyen, 2020; Martinis & Houghton, 2019). According to the concept of risk-based auditing, auditors should assess essential presentation risks and minimize undetected risks to reduce audit risk to an acceptable level (Levytska et al., 2022). International audit companies have developed modern audit methods, namely the business risk audit methodology, in response to the requirements of International Auditing Standards (IAS) and to keep up with the rapidly evolving business environment. The audit-based approach was introduced as a significant innovation in auditing; it is a technique based on an analytical approach to planning the audit process, assessing risks, conducting substantive tests, and collecting related evidence. Through a risk audit approach, sound and forward-looking risk management strategies can be implemented to help organizations improve decisions. Integrated risk-based auditing is a multi-stage, multi-criteria, and multi-objective decision-making practice. The process involves risk assessment, selection of auditable areas, and resource allocation, which requires strong analytical skills (Esmail & Haque, 2022; Deng et al., 2023; Apreku-Djan et al., 2022; Wang et al., 2023).

Audit methodology evolves as professionals scrutinize effectiveness, leading to remedies and process improvements to address shortcomings. This evolutionary process stems from the audit's adaptation to societal demands and can be categorized into four distinct approaches: the Substantive Procedural Approach, the Balance Sheet Approach, the Systems-Based Approach, and the Risk-Based Approach (Prinsloo, 2008; Sardasht & Rashedi, 2018). Several audit approaches can be identified by drawing upon prior research and the evolution of audit methodologies. First is the Substantive Approach, which involves the examination of financial reports. The key elements encompassing audit directives, subjects, and audit scope are as follows: (a) Detecting fraud, (b) Identifying technical errors, and (c) Identifying significant errors. Audit techniques pertain to both ongoing audits and audit finalization. This approach verifies most general ledger transactions, including cash, sales, petty cash, checks, and trial balance (Dicksee, 1905). Auditors scrutinize a substantial number of transactions and account balances, yielding highly persuasive evidence, but requiring significant time and resources. Balance sheet items are categorized by focusing on auditing balance sheet accounts, with limited procedures on income statement items. Second is the Balance Sheet-Based Audit Approach, which dated back to 1904 to 1940 and aimed to identify and report irregularities by focusing on transaction details. It involved audit planning and evidence collection, but lacked thorough execution (Le et al., 2022). Third is Audit Planning, whereby auditors must allocate time to assess customer characteristics, especially internal controls, by identifying strengths and weaknesses and adjusting testing accordingly. Fourth is the Customer Business Strategy, which requires auditors to analyze customer business strategies, potential risks, risk management responses, and their impact on financial statement deviations. An unqualified report may be issued if a material risk is missed. RBA requires identifying high-risk areas with significant misstatements. Subsequently, this identification guides the selection of appropriate audit methods aimed at mitigating such risks (Le et al., 2022; Hayes, 2014).

This permits a constrained exploration of various audit methodologies (Prinsloo, 2008):

### 1. Dicksee Approach (1904)

The initial audit approach under discussion is the Dicksee (1905) approach. The 1904 edition of Lawrence Dicksee's Auditing Manual recognized testing's emergence in auditing practice in England and the United States. The audit methodology detailed in Dicksee's Audit Manual (1904) is known as the 'balance sheet approach'.

## 2. Balance Sheet Audit Approach

The second audit approach under consideration is the Balance Sheet Audit Approach. Dicksee's method is called a balance sheet approach, but it is not truly comprehensive. Still, it laid the foundation for this approach.

## 3. Systems-Based Audit Approach

The third audit approach under examination is the Systems-Based Audit Approach. Aren and Loebbecke (1976) label it an integrated approach. Three audit approaches align with specific time periods: Dicksee (1905), balance sheet (1904-1940), and system-based (1940-1972). It is worth noting that these timeframes cannot be determined with precision (Prinsloo, 2008). The components of the audit risk model are influenced by various factors. RBA audits and quality are affected by legal institutions, societal context, working conditions, and client attributes. Factors influencing RBA and audit quality require specific research focus due to their potential invisibility during the audit process. The conventional audit approach often neglects these factors in the majority of balance sheet audits (Le et al., 2022; Naibe, 2014). A risk-based audit approach provides independent assurance to the board that there is a sound risk management framework within the organization and the risks that may impact performance (Apreku-Djan et al., 2022).

### 2.4 Capacity of Auditors

Knowledge, skills, and other competencies are important and necessary factors that influence the professional competence of auditors (Ta & Doan, 2022). Research shows that auditors' professional expertise is the most influential factor in risk detection, followed by audit evidence and sample size (Le et al., 2022). Productivity, efficiency, and performance are particularly crucial in discussing audit performance within the context of audit production efficiency. Productivity is an absolute concept of output-to-input ratio, while efficiency is relative actual optimal ratio (Martinis & Houghton, 2019). To increase the transparency of audit practices and provide stakeholders with useful information regarding audit quality, regulators should also consider requiring audit firms to disclose information about individual assignments and workload allocation. Capacity measures related to normal audit tasks can be positively related to audit quality. Tight capacity can place greater pressure on auditors and limit their access to resources, possibly resulting in lower audit quality (Lo, Lin & Wong, 2022; Yu & Huang, 2023). Therefore, the following hypotheses are proposed:

H<sub>1a</sub>: The capacity of auditors has a positive relationship with the risk-based approach in West Sumatra audit firms.

H<sub>1b</sub>: The capacity of auditors has a positive relationship with the quality of independent audits in West Sumatra.

### 2.5 Job Pressure on Auditors

Auditor pressure is defined as a large amount of work that can cause the emergence of dysfunctional audit behavior, leading to a decrease in the auditor's ability to find errors or report irregularities in the client's financial statements. It is a condition where there is an imbalance between the number of clients that must be handled and the audit completion time. High audit quality from an audit company will increase professional pressure on its employees and auditors with low quality may decide to give up their audit profession to search another profession for their career (Nurbaiti & Sabilla, 2022; Pham et al., 2022). Fewer audit hours may not produce the same audit results and placing time pressure on the audit team can lead to a reduction in audit quality. Lesser time pressure imposed on the auditor will lead to better audit quality. Certain limitations arise in the field of auditing, which cause pressure to reduce time (Nehme, Michael & Haslam, 2022).

Audit office workload compression level measures the office-level busyness and pressure. Heavy and extensive workload will require the assistants to work overtime and within a stressful environment. Therefore, audit firms need to take action to improve working conditions. The complexity of the task can influence the auditor's efforts in processing information that will impact their decisions or considerations (Pham et al., 2022; Aida, 2021). The factors influencing business risk audits can significantly impact external audit quality, emphasizing risk analysis for material misstatement assessment. Assessing internal and external risks helps allocate audit resources and align efforts with management objectives for effective risk management (Le & Nguyen, 2020). The detection and prevention of fraud are of paramount importance and can be enhanced when auditors pay close attention to fraud indicators, which should be reported. In this regard, the auditor's expertise and experience are highly relevant in both preventing and comprehending fraud (Rose, 2007). These factors exert pressure on auditors to conduct audits in line with the approach. Based on the prior research by Le et al. (2022), the following hypotheses are proposed:

H<sub>2a</sub>: Job pressure on auditors has a negative relationship with the risk-based approach in West Sumatra audit firms.

H<sub>2a</sub>: Job pressure on auditors has a negative relationship with the quality of independent audits in West Sumatra.

### 2.6 Information Technology (IT)

Information technology has transformed audit methodologies with electronic documents and aggregation software adoption in recent years. These tools process audit data and facilitate real-time audit procedures within a computerized environment, underscoring the necessity for information technology support (Le et al., 2022). The ISACA (Information Systems Audit and Control Association), an international professional association focused on IT governance and auditing, describes continuous auditing as a method that allows the receipt of written reports regarding audit-relevant transactions almost instantly or immediately after those transactions (Durdu et al., 2023).

The IT environment requires auditors to develop audit services to suit the technical development of business units. The use of information technology in audit services contributes to achieving high efficiency and quality in the provision of audit services (Al-Khasawneh, 2022). The factors associated with technology acceptance can be categorized into four primary groups: individual factors (such as perceived usefulness, ease of use, and subjective norms), organizational factors (including company size, readiness, and top management support), environmental factors (involving aspects like the complexity of AIS clients, competitive pressures, and professional body support), and technological factors (where reinvention is occurring at this stage). Subsequently, it is adopted across the entire organization. The innovation, when consistently employed and gains clarity among the organization's members, influences the stages of technology-task alignment and the cost-benefit analysis of technology (Afsay et al., 2023). Information technology increases its impact on efficiency and automates the audit testing process, which strengthens the company's overall audit approach and methodology. End user satisfaction, information quality, system quality, IT managerial capabilities, and IT technical capabilities are all drivers influencing implementation success (Durdu et al., 2023; Espidola et al., 2022). The following hypotheses are therefore proposed:

H<sub>3a</sub> : IT support has a positive relationship with the risk-based approach in West Sumatra audit firms.

H<sub>3b</sub> : IT support has a positive relationship with the quality of independent audits in West Sumatra.

### 2.7 Competitiveness of Audit Firms

Audit activities require professionals with the necessary qualifications and competencies to conduct the entire series of audits obligated by their mandate. To ensure good governance, auditors must comply with the minimum continuing education requirements set by the organization and relevant professional standards. Audit firms with larger clients are more independent and motivated to provide audits of higher quality. They are also more competent due to accumulated professional skills and knowledge as well as additional resources for staff training. Competitiveness is important because it is considered a tool that creates competitiveness in the IT environment, which contributes to the achievement of excellent and efficient allocation and use of resources (Apreku-Djan et al., 2022; Al-Khasawneh, 2022).

Efficiency is a relative concept quantified by metrics that assesses how effectively an organization utilizes its resources (inputs) to attain desired outcomes (Martinis & Houghton, 2019). Enhancing the company's image, cost reduction, heightened business efficiency, and the preservation of service quality provide a competitive edge for attracting and retaining customers (Le et al., 2022). Competitive advantage is a plus point over competitors that is obtained from having the ability to do something better. Companies without a competitive advantage will have poor performance and unable to compete with similar companies. A framework is needed for effective management of company risk levels (Ricardianto et al., 2023; Mahama et al., 2022). Therefore, the following hypotheses are proposed:

H<sub>4a</sub> : The competitive capability of auditing firms has a positive relationship with the risk-based approach in West Sumatra audit firms.

H<sub>4b</sub> : The competitive capability of auditing firms has a positive relationship with the quality of independent audits in West Sumatra.

### 2.8 Audit Fee

Audit fee is the amount charged by external auditors as compensation for their work as assessors of the fairness of financial statements. It is an important aspect for checking the quality of a company's financial reports. The high cost of auditing makes audit procedures extensive, while the breadth of these audit procedures allows client errors to be detected. Auditors use various factors to determine audit fees, which can be divided into audit fees and non-audit fees. Audit fees are the total fees paid to auditors for audit services (Nurbaiti & Sabilla, 2022; Susanto, 2023; Pourheidari & Golmohammadi, 2023). Big 4 and non-Big 4 auditors emphasize different aspects of client risk when determining audit fees and the fee premiums that auditors apply. Auditors use various factors to determine the price of audit services, including complexity, client size, and associated risks. Additionally, audit fees reflect the costs of efforts expended by public auditors and the risk of litigation. Auditors may differ in size, level of experience, competency, and quality, which can also influence audit fees. From a supply-side perspective, several different factors can influence the price demanded by an audit. Several authors also propose that the auditor's audit fee is equal to the sum of the expected legal liability costs and the audit effort costs. Auditors may need to charge higher fees to compensate for residual risks that cannot be reduced through greater audit effort (Xue & O'Sullivan, 2023; Widmann, 2021; Choi et al., 2022).

Previous research has regarded audit fees as a factor influencing external audits. Nevertheless, the majority of these studies were conducted in developed countries. This necessitates additional time and labor to complete the audit process, subsequently raising audit expenses. Audit fees refer to the payment made to the auditor for conducting an audit. Several factors have an impact on audit costs, including internal audit fees, the degree of consistent adoption of accounting standards, the diversity of client operations, and the level of competition among audit firms (Kanakriyah, 2020). Another determinant of audit costs is information technology. The impact of information technology on audit costs is the use of information technology in the audited company imposes costs on the auditor (Al-Khasawneh, 2022). The following hypotheses are therefore proposed:

H<sub>5a</sub> : Audit fee has a positive relationship with the risk-based approach in West Sumatra audit firms.

H<sub>5b</sub>: Audit fee has a positive relationship with the quality of independent audits in West Sumatra.

### 2.9 Client's Risk

Auditor-identified client risks refer to the number and types of auditor-identified risks disclosed. It concerns the client's risk objectives identified by the auditor (i.e., risks that require special audit consideration) and the risk objectives identified by the audit committee. External auditors are expected to take high responsibility for the quality of client risk reports by increasing audit activities related to risk reports (Dwyer et al., 2023; Bozzolan & Miihkinen, 2021).

Client risk, along with audit risk, is regarded as another primary factor in determining audit fees. Risk can be defined as the likelihood of a loss occurring. Auditors are expected to exercise caution in forming their opinions. It is a well-established fact within the accounting domain that a higher number of subsidiaries correlates with larger-scale operations and activities. Consequently, this leads to an expansion of audit tasks, resulting in increased audit expenditure. This suggests that the growth of client operations, the inclusion of a greater number of diverse or foreign clients, and the introduction of additional products necessitate a higher level of audit effort (Kanakriyah, 2020). Auditors do not provide an absolute guarantee that financial statements are devoid of material misstatements due to the impossibility of achieving complete certainty. The auditor's goal in conducting a risk-based audit is to attain a sufficient level of assurance that the financial statements are devoid of material misstatements, irrespective of whether they result from fraud or error. High inherent risk and high control risk combined lead to a significant increase in the planned audit hours, as opposed to when both risks are low (Le et al., 2022; Levytska et al., 2022). Therefore, the following hypotheses are proposed:

H<sub>6a</sub>: Client's risk has a positive relationship with the risk-based approach in West Sumatra audit firms?

H<sub>6b</sub>: Client's risk has a positive relationship with the quality of independent audits in West Sumatra?

### 2.10 Risk-Based Approach

RBA begins with the overall objectives of the organization and determines whether risks that adversely affect those objectives are reduced to acceptable levels by internal controls to ensure their achievement. Originally intended for large audit firms and developed countries (Le et al., 2022), the methodology provides an independent and objective opinion to an organization's management to determine whether risk management is being performed at an acceptable level. Furthermore, auditing through a risk-based approach will reduce the potential for audit opinion errors and help achieve audit objectives (Amran et al., 2023). Prominent audit firms, endowed with greater financial resources, can acquire and sustain advanced audit software while offering comprehensive training programs for their personnel (Afsay et al., 2023). Another aspect to consider is whether conducting audits according to the risk-based approach affects audit quality. Several studies have noted that RBA-based audits are more efficient and effective compared to traditional methods. It is important for auditors to plan and implement the audit process using risk-based auditing because it allows them to avoid implicit audit risks control and discovery (Sahaib, 2023). The following hypothesis is therefore proposed:

H<sub>7a</sub>: The implementation of the risk-based approach influences the quality of independent audits in West Sumatra.

### 2.11 Previous Research

Another factor affecting the implementation of RBA and the quality of independent audits is auditor capacity. Numerous studies have explored the association between audit fees and the performance of audit firms (Kanakriyah, 2020; Le et al., 2022). Previous research on technology acceptance has demonstrated that, from an individual perspective in auditing, the most influential factors in technology acceptance are facilitating conditions, perceived benefits, and the availability of data in relation to perceived ease of use (Afsay et al., 2023). Other factors include corporate governance capabilities, gradual establishment of a brand, development of corporate culture, and establishment of a market reputation. Small audit firms face persistent challenges in generating sufficient revenue to sustain their operations and they are unable to allocate resources in terms of both money and time for training programs (Le et al., 2022; Naibe, 2014).

### 2.12 Conceptual Framework

Previous research suggests that auditor capacity and the consideration of auditor pressure are significant factors of audit quality, in addition to business size, complexity of the audit process, audit risk, audit firm size, audit duration, and the effectiveness of the internal control system. The International Auditing and Assurance Standards Board (IAASB) highlights the beneficial influence of technological advancements in financial statement audits. These advances enhance auditor competitiveness across various dimensions (Afsay et al., 2023; Kanakriyah, 2020; Le et al., 2022). Small companies concentrate on expansion strategies, which may include mergers with other small companies. They prioritize enhancing their clients' skills and capabilities as a means of gaining a competitive advantage (Naibe, 2014). Subsequently, the theoretical foundation of prior research serves as the basis for developing the research framework of this study (see Figure 1). The Structural Equation Model is employed to examine the implementation of the risk-based approach and its influence on independent audit quality by utilizing evidence from West Sumatra.

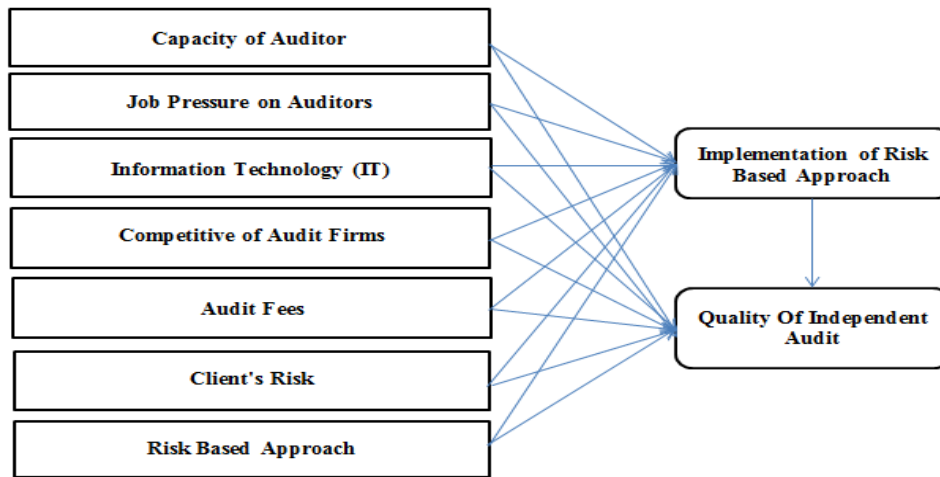


Figure 1. Conceptual framework

### 3. RESEARCH METHOD

The research sample comprised of auditors in West Sumatra who possessed both CPA/CA and non-CPA/CA certifications with sufficient experience in the auditing profession, ranging from 1 to 10 years. These auditors encompassed both males and females within the age range of 25 to 50 years old. The selection of auditors as participants was done based on several criteria set by expert auditors. This method of sampling is known as purposive sampling, which involves the deliberate selection of specific entities within the population to constitute the sample (Mishra & Alok, 2017).

#### 3.1 Quantitative Research Methods

Le et al. (2022) posit that quantitative research allows the verification and confirmation of a model's reliability. In this study, qualitative research was undertaken to achieve two objectives: (1) To explore the characteristics of the risk-based approach, and (2) To identify the factors influencing the quality of RBA-based financial audit reports in company audits across West Sumatra. The quantitative research involved the following stages:

##### *Stage 1: Building a Research Model*

A research model was developed by drawing upon the outcomes of the qualitative research. This model illustrates the connections between the dependent variables (the implementation of a risk-based approach and independent audit quality) with the independent variables (auditor capacity, auditor job pressure, information technology support, competitive capabilities of audit firms, audit fees, and client risk).

##### *Stage 2: Survey Instrument Design*

This study utilized a questionnaire as its survey instrument. It gathered general information about the respondents and employed a 5-point Likert scale (1 - Strongly Disagree, 2 - Disagree, 3 - No comments, 4 - Agree, and 5 - Strongly Agree) to elicit information regarding the factors that influence RBA and independent audit quality. A high score indicates that the factors have an important influence on the implementation of RBA, while a low score denotes minimal influence. The use of Likert scale allows the respondents to express their level of agreement or disagreement with a set of statements related to their attitudes and opinions (Kosova et al., 2023; Melo, Gonçalves & Bessa, 2023; Watanabe et al., 2024). The questionnaire had a total of 35 items adapted from prior research (see Appendix A).

##### *Stage 3: Selecting Samples and Formal Surveys*

Scholars generally propose that the minimum sample size must exceed the number of observed variables to ensure reliability. Hence, a total of 60 questionnaires were administered to auditors employed in audit firms across West Sumatra. Such a process was done online via Google Forms and face-to-face by personally delivering the questionnaires to the audit firms.

##### *Stage 4: Processing Data*

The data were analyzed in terms of scale reliability, correlation analysis, confirmatory factor analysis, and structural equation factors. This was achieved using Structural Equation Modeling via the PLS 4 software.

### 4. RESULTS AND DISCUSSION

#### 4.1 Respondents' Profiles

A total of 42 respondents completed and returned their questionnaires, which constitutes a 70% response rate. These respondents comprised of 23 males (55%) and 19 females (45%). All of them fulfilled the specified criteria, with 12% being CPA certified (n=5) and 88% being non-CPA/CA (n=37). Approximately 30% of the auditors had less than 5 years

of experience, while the remaining 70% had 5 to 10 years of experience. These results (as per Figure 2) indicate that the respondents are well-qualified and experienced auditors, which increases the reliability of the findings.

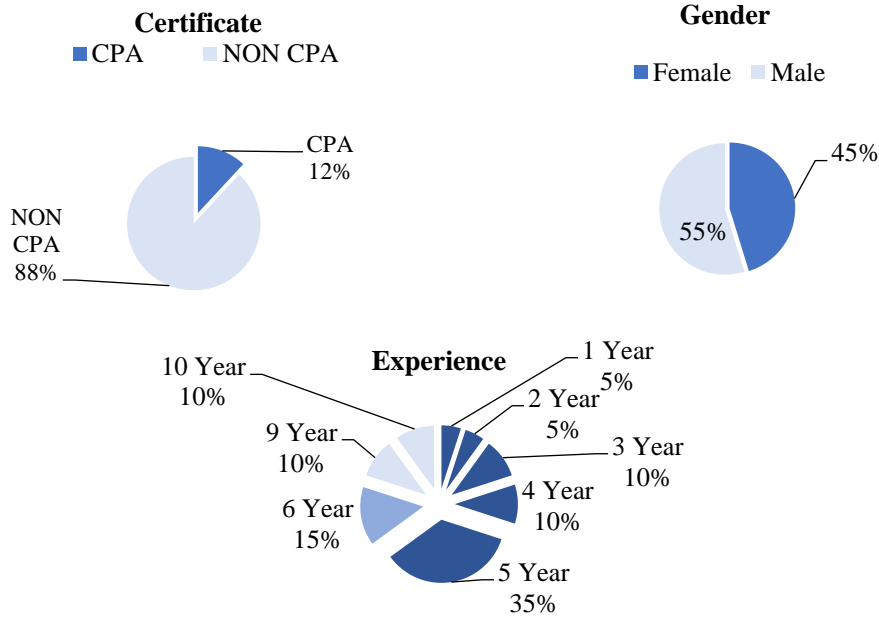


Figure 2. Respondent profile

4.2 Reliability and Descriptive Statistics

Table 1 shows that the Cronbach's alpha coefficient for the variable reached 0.821, signifying that the overall instrument exhibited good reliability. The lowest correlation observed was -0.119, indicating a negative relationship between the variables. The standard deviation was 1.183 while the average for the dependent variable was 4.74, which was greater than 3.5. This suggests that the data followed a normal distribution. The skewness value was also within the range of 0.365, indicating that the observed variables exhibited a normal distribution.

Table 1. Reliability and descriptive statistics (variable testing)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Mean	Std. Deviation	Skewness
CA1	123.93	79,483	0,241	.802	4,33	.477	.734
CA3	124.02	82,024	-0,057	.810	4,24	.532	.192
JP1	124.57	74,446	0,405	.795	3,69	.924	-.887
JP2	124.57	73,714	0,410	.795	3,69	1,000	-.556
JP3	124.60	73,710	0,436	.794	3,67	.954	-.858
JP4	124.50	72,500	.467	.792	3,76	1,031	-.753
JP5	124.57	71,275	.562	.787	3,69	1,000	-.710
IT1	124.00	78,780	.215	.803	4,26	0,665	-.348
IT2	124.05	76,876	.348	.798	4,21	.717	-.762
IT3	123.95	78,046	.290	.800	4,31	.643	-.385
IT4	124.02	76,560	.416	.796	4,24	.656	-.287
IT5	124.02	76,756	.373	.797	4,24	.692	-.819
IT6	123.83	73,752	.659	.787	4,43	.668	-.758
CF1	124.93	80,897	-.025	.821	3,33	1,183	-.045
CF2	124.52	81,085	-.022	.818	3,74	1,037	-.679
CF3	124.60	82,930	-.119	.821	3,67	.979	-1.066
CF4	124.81	81,719	-.057	.820	3,45	1,064	-.380
AF1	124.12	76,985	.384	.797	4,14	.647	-.708
AF2	124.05	76,778	.378	.797	4,21	.682	-1,265

Table 1. (cont.)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Mean	Std. Deviation	Skewness
CR1	124.02	74.804	.486	.793	4,24	.759	-.787
CR2	123.90	74.479	.569	.790	4,36	.692	-1,078
CR3	123.90	76.771	.461	.795	4,36	.577	-.204
CR4	123.83	76.874	.478	.795	4,43	.547	-.172
RBA1	124.05	75.412	.444	.794	4,21	.750	-.743
RBA2	123.98	77.048	.386	.797	4,29	.636	-.317
RBA3	124.05	76.095	.437	.795	4,21	.682	-.781
RBA4	123.93	76.605	.447	.795	4,33	.612	-.323
QIA1	123.76	78.820	.245	.802	4,50	.595	-.731
QIA2	123.60	78.198	.395	.798	4,67	.477	-.734
QIA3	123.64	76.479	.529	.794	4,62	.539	-.994
QIA4	123.52	79.182	300	.801	4,74	.445	-1,124

**Note:** CA = Capacity of Auditor; JP = Job Pressure on Auditor; IT = Information Technology; CF = Competitiveness of Audit Firm; AF = Audit Fee; CR = Client's Risk; RBA = Risk-Based Approach, QIA = Quality of Independent Audit.

4.3 Exploratory Factor Analysis

Exploratory factor analysis (EFA) is highly beneficial when working with variables that exhibit relatively high correlation coefficients and when creating new variables that capture the collective behavior of the original variables. Factor analysis is a multivariate technique that strives to identify a limited number of factors representing the combined behavior of interrelated variables (Fávero & Belfiore, 2019). The KMO test results in Table 2 show a value of 0.734 and a significance level of 0.000 (which is less than 5%), indicating the feasibility of conducting factor analysis. Table 3 reveals a cumulative percentage of 27.222%, which falls below the recommended critical value of 50%. The observed variables were categorized into 6 groups out of a total of 8 variables. In Table 3, variables CA 2, CA 4, AF 3, and AF 4 exhibited values below 0.70, leading to their rejection. After deletion, these variables surpassed the 0.70 threshold and were deemed acceptable. Meanwhile, EFA was conducted for the dependent variable. Tabel 4 shows that the KMO RBA and QIA tests yielded values of 0.751 and 0.782 with a significance level of 0.000, indicating a significant overall correlation among the observed variables. The total variance explained was 50% and the factor loadings exceeded 0.7, suggesting that one factor explained the variance adequately. Hence, factor analysis was deemed appropriate for the dependent variable.

Table 2. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.734
Bartlett's Test of Sphericity	Approx. Chi-Square	76.527
	Df	28
	Sig.	.000

**Note:** p > 0.05, Sig. 0.000

Table 3. Rotated component matrix (rotated)

COMPONENT	AF	CA	CF	CR	IT	JP	QIA	RBA
AF 1	.916							
AF 2	.899							
CA 1		.877						
CA 3		.931						
CF 1			.859					
CF 2			.882					
CF 3			.871					
CF 4			.888					
CR 1				.908				
CR 2				.923				
CR 3				.878				
CR 4				.879				

Table 3. (cont.)

COMPONENT	AF	CA	CF	CR	IT	JP	QIA	RBA
IT 1					.823			
IT 2					.754			
IT 3					.789			
IT 4					.938			
IT 5					.782			
IT 6					.770			
JP 1						.919		
JP 2						.822		
JP 3						.955		
JP 4						.958		
JP 5						.966		
QIA 1							.852	
QIA 2							.937	
QIA 3							.931	
QIA 4							.855	
RBA 1								.933
RBA 2								.915
RBA 3								.843
RBA 4								.769
Cumulative Percentage 27.222%								

**Note:** Cumulative Percentage 27.222%, Cumulative of all component variables.

Table 4. EFA for two dependent variables

Item	RBA	QIA
KMO and Bartlett's Test	.751	.782
Sig.	.000	.000
Total Variance Explained	68.199	73.682
Factor Loading	> 0.7	> 0.7

**Note:** p > 0.05 RBA Variable, p > 0.05 QIA Variable

#### 4.4 Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was employed to evaluate three primary models, as proposed by Schwartz and Boehnke (2004). Figure 4 illustrates the CFA outcomes, which confirm the validity of all variables with loading factors exceeding 0.70. Subsequently, composite reliability was met and exceeded 0.70, Cronbach's alpha was fulfilled and exceeded 0.70, and the overall AVE was above 0.50. Discriminant validity (HTMT) also met the criteria of < 0.90, the requirements of RMSEA 0,222 < 0.08 and Chi Square 2.714 < 3 were met, NNFI/TLI was smaller than 0.90 or 0.594 < 0.90, CFI 0.655 < 0.90, and SRMR was 0.095 > 0.05. Therefore, it can be concluded that the model fit is reasonably good despite not fully meeting the criteria. Table 5 reveals that the average variance extracted (AVE) and composite reliability (CR) values exceeded 0.70 and the AVE value surpassed 0.5, thus ensuring the convergence of the scale.

Table 5. Reliability, convergent validity, and discriminant validity

	Cronbach's Alpha	CR (rho_a)	Composite Reliability	AVE	AF	CA	CF	CR	IT	JP	QIA
AF	.786	.791	.903	.824							
CA	.781	.822	.899	.817	.067						
CF	.900	.931	.929	.766	.242	.246					
CR	.921	.947	.943	.805	.512	.156	.457				
IT	.897	.919	.920	.659	.356	.174	.464	.600			
JP	.962	1.017	.968	.857	.122	.218	.141	.164	.148		
QIA	.917	.944	.941	.800	.313	.380	.197	.332	.305	.167	
RBA	.888	.900	.923	.752	.472	.214	.410	.581	.725	.088	.364

**Note:** Cronbach's Alpha p > 0.06, AVE p > 0.05, Composite Reliability p > 0.07

#### 4.5 Structural Equation Modeling

Figure 4 shows the indicators of Chi-Square/df = 1.312 < 3 and Chi-Square/df = 3.224. The GFI was 0.498 < 0.9, CFI was 0.513 < 0.95. RMSEA = 0.230 < 0.8, TLI was 0.436 < 0.90, and P Value was 0.000. It denotes that the model fits well (Le *et al.*, 2022). However, slight differences were revealed through the utilization of the latest Partial Least Squares Structural Equation Modeling (PLS-SEM). Table 6 demonstrates that CA (Auditor Capacity) influences the quality of independent audits, while IT (Information Technology) impacts the Risk-Based Approach. The hypothesis is supported by CA 0.009 < 0.05 and IT 0.002 < 0.05.

Table 6. Hypothesis Testing Results

	Sample (O)	Mean (M)	STDEV	T statistics (O/STDEV)	P values	Label
AF → QIA	.155	.162	.172	.902	.367	H5b Not Supported
AF → RBA	.178	.175	.175	1.019	.308	H5a Not Supported
CA → QIA	-.385	-.364	.148	2.605	.009	H1b Supported
CA → RBA	-.129	-.133	.129	1.003	.316	H1a Not Supported
CF → QIA	.131	.133	.165	.792	.428	H4b Not Supported
CF → RBA	-.040	-.057	.142	.278	.781	H4a Not Supported
CR → QIA	.257	.254	.221	1.162	.245	H6b Not Supported
CR → RBA	.162	.131	.185	.880	.379	H6a Not Supported
IT → QIA	.115	.095	.243	.474	.635	H3b Not Supported
IT → RBA	.500	.513	.164	3.053	.002	H3a Supported
JP → QIA	.118	.078	.180	.652	.515	H2b Not Supported
JP → RBA	-.049	-.016	.147	.336	.737	H2a Not Supported

Note: p < 0.05

	Estimated model	Null model
Chi-square	583.495	1.321.531
P value	.000	.000
ChiSqr/df	2.714	5.223
RMSEA	.202	.317
RMSEA LOW 90% CI	.182	.300
RMSEA HIGH 90% CI	.222	.334
SRMR	.095	n/a
NFI	.558	n/a
TLI	.594	n/a
CFI	.655	n/a

Note: Data Processed Confirmatory Factor Analysis (Supporting Data)

	Result
Chi-square	1.312.234
P value	.000
ChiSqr/df	3.224
RMSEA	.230
GFI	.498
TLI	.444
CFI	.513

Note: Data Processed Result Structure Equation Modeling (Supporting Data)

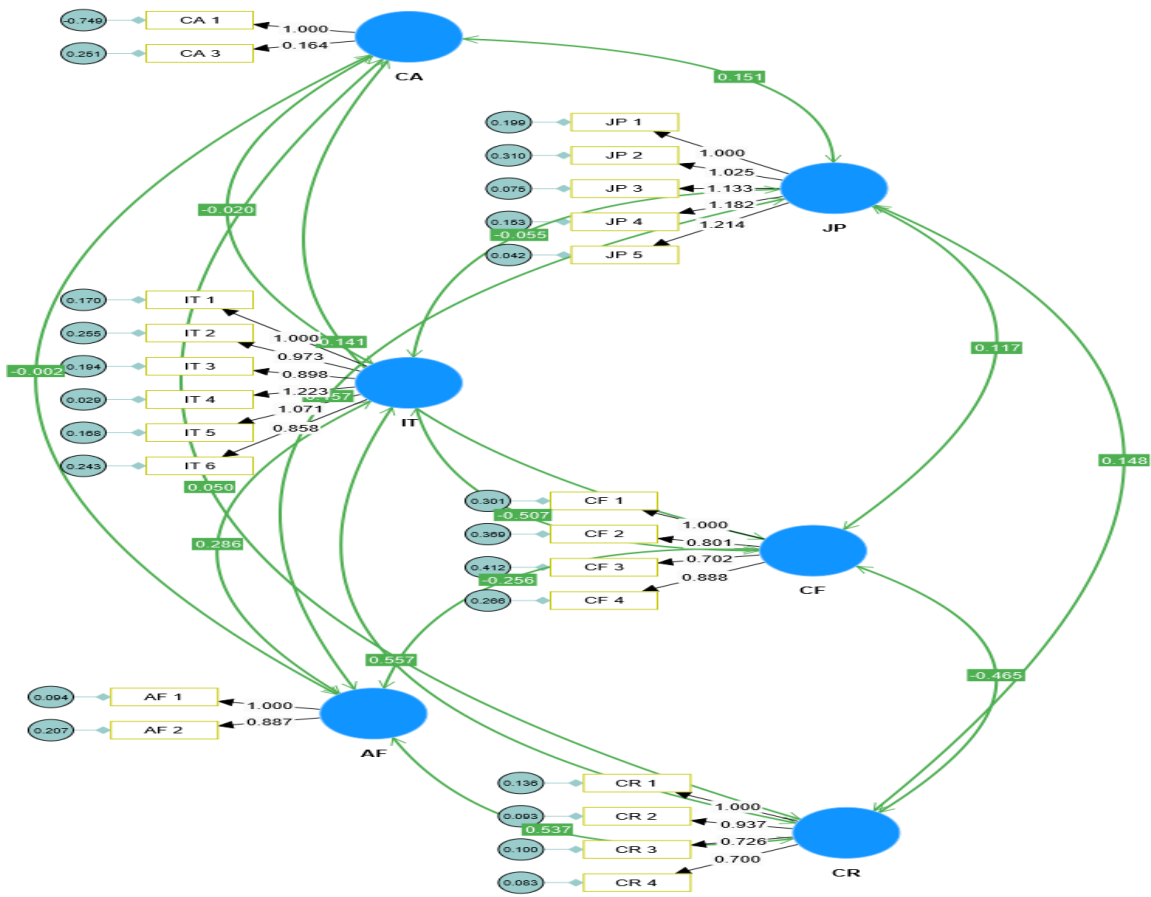


Figure 3. Confirmatory Factor Analysis

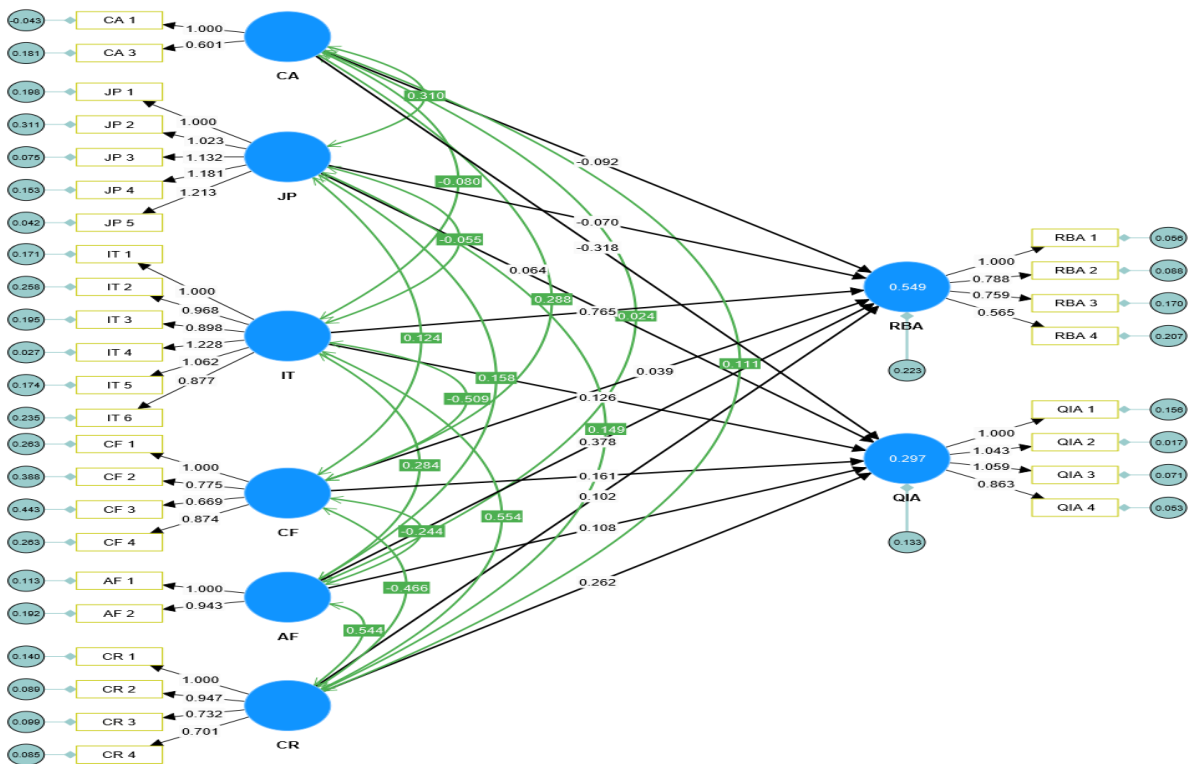


Figure 4. Structure Equation Modeling

#### 4.6 Discussion

The adoption of a risk-based approach for auditing purposes by audit firms in Indonesia, particularly in West Sumatra, is a relatively recent development, as indicated by PMK 186/2021. Risk-based auditing is still in its nascent stages, particularly in developing countries. This research aims to identify the factors influencing the risk-based approach and

the quality of independent audits in West Sumatra. The results indicate that these influencing factors exhibit a negative relationship with the implementation of the risk-based approach and the quality of independent audits. However, auditor capacity positively influences the quality of independent audits, and information technology (IT) has a positive impact on the risk-based approach. This research concludes that the risk-based approach does not exert a significant influence on audit quality. It is observed that auditor capacity, which also lacks significant influence, implies that a qualified and experienced auditor is considered superior to one with lesser qualifications. In this research, a majority of the auditors (35%) had five years of work experience. Some auditors in the age range of 23 to 25 years did not meet the formal qualifications but exhibited competence in conducting audits. Auditor job pressure, government regulations, and organizational regulations pose challenges in the implementation of RBA. However, these obstacles must be overcome to ensure quality performance. Past studies have reported that auditor capacity has a crucial impact on the implementation of RBA and holds the highest level of influence on audit quality (Le & Nguyen, 2020; Le et al., 2022). Auditor motivation plays a role in influencing RBAA, while auditor job pressure affects both RBA and QA. Technological factors also possess an impact on the advancement of risk-based audit implementation. It is worth noting that audit firms with strong competitiveness tend to influence RBA performance but exhibit weaker performance in audits. Both large and small audit firms strive to enhance their competitiveness in order to showcase improvements in quality (Le & Nguyen, 2020; Le et al., 2022).

Audit fees have been found to be unrelated to audit quality (Mawutor et al., 2019). Information technology also plays a role in influencing the implementation of risk-based audits and the quality of independent audits. Moreover, factors related to audit costs can affect the implementation of risk-based audits (Le et al., 2022; Le & Nguyen, 2020). Client risk does not exhibit a significant effect on both RBA and the quality of independent audits. This research highlights that each critical risk factor does not lead to increased costs. Three distinct approaches have been established to analyze the impact of critical risk factors on costs, with the first two approaches emphasizing on critical risk factors with high impacts. In cases of low impact, it is essential to scrutinize risk factors that influence the service delivery process as a means to cost management. Critical risk factors must be identified in this context. Ultimately, proactive measures should be taken to effectively manage and control these risk factors (Le et al., 2022; Ostadi & Zare, 2022).

The implementation of a risk-based approach is influenced by its relation to client risk. The integration of information technology into audit activities has become a necessary trend, particularly as businesses increasingly rely on computer systems for recording, tracking, and processing transactions. This is the reason why information technology has the second-strongest influence on both the implementation of RBA and audit quality (Le et al., 2022; Le & Nguyen, 2020). Meanwhile, the most significant and positively influential factors for the adoption of risk-based audit approach (RBAA) are auditor capability and technological advancements. This underscores the importance of learning mechanisms and increasing knowledge about auditing and information technology as essential prerequisites for auditors. In addition to auditor efforts, stakeholder involvement also needs to be implemented (Le & Nguyen, 2020). These findings are useful for the implementation of risk-based audit approaches in both developed and developing countries (Le et al., 2022).

## 5. CONCLUSION

### 5.1 Conclusion

Our findings indicate that enhancing audit quality through the utilization of a risk-based approach yields negligible outcomes. Therefore, several factors must be taken into account.

First, augmenting auditor capacity holds significant sway over the adoption of a risk-based approach. Professional qualifications are imperative and auditors should endeavor to enhance their capabilities. The implementation of a Key Performance Indicator (KPI) performance measurement system, both in management and evaluation stages, aids in assessing auditors' performance. Human resources are substantially influenced by a company's audit policies (Le et al., 2022).

Second, the pressure on auditors during audit activities is an inevitable aspect that can either be mitigated or managed by boosting motivation through incentives and fostering a conducive environment for auditors. This approach has been implemented successfully by West Sumatra Public Accounting Firms (Le et al., 2022).

Third, the utilization of risk-based information technology plays a crucial role. This advancement requires auditors to refine their risk-based implementation skills. Furthermore, audit firms should allocate resources for technology development and provide auditors with cutting-edge audit tools, such as high-tech auditing equipment (Le et al., 2022). Le et al. (2022) emphasize the importance of sampling support software, analysis software, security software, and customer data storage in the auditing process. Information technology not only enhances data processing speed but also assists in improving data quality and meeting audit standards.

Fourth, competitive audit firms focus on enhancing their competitiveness in auditing practices. They invest in building their brand, expanding their capacity in corporate governance auditing, and cultivating a strong reputation to attract more clients and foster long-term partnerships. This approach is developed as part of a comprehensive, long-term strategy. Le et al. (2022) pointed out that companies with competitive advantages, such as a large scale, strong reputation, and effective training programs, are better equipped to provide adequate guidance documents for the successful implementation of RBA.

Fifth, setting audit fees. It is essential to establish regulations governing audit fees to promote transparency and a healthy business environment. Audit fees should be determined at a professional and reasonable level in accordance with the supply and demand relationship. Audit fee provisions are stipulated in IAPI Regulation Number 2 of 2016, which pertains to the determination of audit service fees.

Sixth, client risk and a risk-based approach. The suitability of this approach may be theoretically sound, but the specific nature and significance of the risks assessed can vary.

## 5.2 Implications

This research has several theoretical implications for improving audit quality through the use of a risk-based approach that only provides negligible results. Several factors must be considered based on the research. First, increasing auditor capacity has a significant influence on the quality of independent audits. The continuous improvement of auditor capacity illustrates that increasing auditor professionalism, ability, and responsiveness in audits will result in improved audit quality. Our research shows that auditor capacity has a greater influence on the quality of independent audit (Table 6). The increase in auditor capacity will uphold the auditor's ability, thus raising the standard of audit management with a risk-based approach. Auditor competency or capacity helps auditors to assess the client's current business conditions and emerging problems, thereby providing suggestions and recommendations to improve organizational activities (Ta & Doan, 2022). Second, the pressure on auditors during audit activities is an inevitable aspect that can either be mitigated or managed by boosting motivation through incentives and fostering a conducive environment for auditors. This approach has been implemented successfully by West Sumatra Public Accounting Firms (Le et al., 2022). The pressure of auditor work persists as professional auditors are required to complete extensive auditing work accurately and on time. Job pressure is nothing new in the working environment. Table 6 shows a negative relationship between time pressure, task complexity, and audit effectiveness, suggesting that job pressure can be managed well and has no influence on the quality of independent audits. However, it cannot be denied that having less time pressure on the auditor will result in better audit quality. Similar condition also applies to the complexity of assignments (Nehme, Michael & Haslam, 2022).

Third, while the utilization of risk-based information technology is crucial, the use of information technology in the audit process remains limited (see Table 6). Therefore, auditors' awareness of the concepts and areas of competitiveness in the information and communication technology environment must be increased. This includes delivering the services provided by the audit office in a manner appropriate to the nature of technical progress, such as website confirmation services, in addition to services related to protection and safety systems, data processing, and technical consulting (Al-Khasawneh, 2022). Le et al. (2022) emphasize the importance of sampling support software, analysis software, security software, and customer data storage in the auditing process. Information technology not only enhances data processing speed but also assists in improving data quality and meeting audit standards.

Fourth, competitive audit firms focus on enhancing their competitiveness in auditing practices. They invest in building their brand, expanding their capacity in corporate governance auditing, and cultivating a strong reputation to attract more clients and foster long-term partnerships. This approach is developed as part of a comprehensive, long-term strategy. Le et al. (2022) pointed out that companies with competitive advantages, such as a large scale, strong reputation, and effective training programs, are better equipped to provide adequate guidance documents for the successful implementation of a risk-based approach. Competitiveness is a tool that provides a competitive environment and achieves efficiency, professional specialization, and development of the use of information technology. It ultimately contributes toward improving the performance of professional auditors (Al-Khasawneh, 2022; Ricardianto et al., 2023; Rodríguez-Espíndola, 2022). Fifth, it is essential to establish regulations governing audit fees to promote transparency and a healthy business environment. Audit fees should be determined at a professional and reasonable level in line with the supply and demand relationship. Audit fee provisions are stipulated in IAPI Regulation Number 2 of 2016, which pertains to the determination of audit service fees. Audit fees are important in checking the quality of a company's financial reports. While the high cost of auditing makes audit procedures extensive, the breadth of this audit procedure allows client errors to be detected (Nurbaiti & Sabilla, 2022). Sixth, there is an interplay between client risk and the risk-based approach. The suitability of this approach may be theoretically sound, but the specific nature and significance of the risks assessed can vary depending on the context. Additionally, the implementation of RBA can be influenced by different audit firms and varying levels of client risk. Therefore, adaptations to RBA may be required to align with the size of the audit firms and the characteristics of the clients (Le et al., 2022).

Responses regarding the advantages of implementing RBAA are consistent across audit firms. These advantages include enhancing audit efficiency and quality, fostering an understanding of client issues and concerns, and bolstering the confidence of clients and users of financial reports. Conversely, critiques of RBAA implementation are primarily articulated by non-large auditors. Limitations in the research include elevated audit expenses, limited familiarity with pertinent subjects, insufficient experience, the absence of relevant guidelines and suitable tools for risk identification, and the intricacies associated with RBAA. The research found that auditors execute their responsibilities in a professional manner, with the majority hailing from prominent public accounting firms (KAPs) in West Sumatra. Audit firms play a significant role in facilitating and motivating auditors by offering information technology resources and financial support. A general recommendation is for smaller audit firms to concentrate on expansion strategies, including potential mergers. This will increase audit costs, enhance competitive advantages, and attract larger clients, ultimately having a positive impact on the adoption of RBAA (Le & Nguyen, 2020). Furthermore, this research determines the general description

and characteristics of a risk-based approach along with the influencing factors. The samples were collected from West Sumatra, and therefore, the outcomes do not provide strong support for the improvement of audit quality through the implementation of a risk-based approach and independent audit quality. The data obtained may not fully represent the required research data. While the application of the risk-based approach has been adopted by audit companies in Indonesia, the impact of its implementation remains unclear and there are limitations in terms of the research timeline. Future studies can expand their scope to include larger geographical areas and sample sizes and employ other research methodologies and designs for a more comprehensive investigation.

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Elvirha Dwi Kartika (the first author) established the research idea, prepared the manuscript, conducted the data collection, and was involved in writing the original draft and editing the manuscript for final submission. Asniati and Elvira Luthan were involved in reviewing, editing, and improving the manuscript for final submission.

## **AVAILABILITY OF DATA AND MATERIALS**

The data of research is available upon reasonable request.

## **ETHICS STATEMENT**

Not applicable

## **CONFLICTS OF INTEREST**

The authors declare of having no affiliations with any organization or having any financial or non-financial interests with the subject matter discussed in this manuscript.

## **GENERATIVE ARTIFICIAL INTELLIGENCE DECLARATIONS**

The author(s) declare that no generative AI or AI-assisted technologies were used in the writing of this manuscript. All content, including text, figures, and tables, was created by the author(s).

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**APPENDIX**

## Appendix A: Questionnaire Items

Item	Description	Source
<b>Capacity of Auditor (CA)</b>		
CA1	Professional auditors contribute to the efficiency of the audit process based on RBA.	Curtis & Turley (2007)
CA2	Qualified auditors perform RBA better than less qualified auditors.	Sardasht & Rashedi (2018)
CA3	Experienced auditors perform RBA better than less experienced auditors.	Moroney & Sim-nett (2009), Low (2004)
CA4	Auditors with extensive knowledge about the clients contribute to the efficiency of the audit process based on RBA.	
<b>Job pressure on Auditor (JP)</b>		
JP1	The regulations of government and professional organizations pressure on auditors when conducting RBA.	Margheim <i>et al.</i> (2011), Umar <i>et al.</i> (2017)
JP2	The regulations of audit firm pressure on auditors when conducting RBA.	
JP3	Demand of customers pressure on auditors when conducting RBA.	
JP4	Expectations of users of audit results pressure on auditors when conducting RBA.	
JP5	Audit time deadline pressure on auditors when conducting RBA.	
<b>The support of information technology (IT)</b>		
IT1	IT contributes toward increasing the efficiency of RBA.	
IT2	The auditor designs and implements appropriate control tests when using computer in RBA.	Bierstaker <i>et al.</i> (2001), Nazmi <i>et al.</i> (2017)
IT3	The computer and its programs contribute in selecting the statistical sampling method in RBA.	
IT4	The computer and its programs contribute in using the analytical procedures in RBA.	
IT5	The computer and its programs contribute in reducing the inherent risk, control, and detection risk.	
IT6	The auditor must be familiar with computer components and databases related to RBA.	
<b>Competitive capability of audit firms (CF)</b>		
CF1	Large-scale audit firms perform RBA better than small-scale audit firms.	
CF2	More reputable audit firms perform RBA better.	Phua <i>et al.</i> (2011), Berry <i>et al.</i> (1989)
CF3	Larger market share audit firms perform RBA better.	Len-nox (1999), Shu (2000)
CF4	Larger trademark audit firms perform RBA better.	
<b>Audit fee (AF)</b>		
AF1	Performing RBA leads to increased auditor fee.	Nazmi <i>et al.</i> (2017)
AF2	The increase in audit fee encourages auditor more depth on RBA.	Rahman <i>et al.</i> (2017), Alaraji <i>et al.</i> (2017)
AF3	High audit fee leads to increased audit quality.	Mawutor <i>et al.</i> (2019)
AF4	Reducing audit fee leads to reduced audit procedures.	
<b>Client's risk (CR)</b>		
CR1	RBA is used more extensively when auditors assess the client's business risk as high.	Johnstone <i>et al.</i> (2004)
CR2	RBA is used more extensively when auditors assess inherent risk as high.	Abdallah <i>et al.</i> (2015)
CR3	RBA is used more extensively when auditors assess control risk as high.	
CR4	RBA is used more extensively when auditors assess IT system risk as high.	
<b>The application of RBA (RBA)</b>		
RBA1	To identify and assess client business risk	Allaham <i>et al.</i> (2017)
RBA2	To identify and assess the risks of material misstatement	Mawutor <i>et al.</i> (2019)
RBA3	To respond to assessed risks of material misstatement	Nazmi <i>et al.</i> (2017)
RBA4	To give an opinion after handling the assessed risks of material misstatement	
<b>Quality of independent audit (QIA)</b>		
QIA1	Providing valuable audit reports	
QIA2	Bringing satisfaction to customers	Alaraji <i>et al.</i> (2017)
QIA3	Giving confidence to use the audit results	
QIA4	Improving audit quality	

Source: Previous Research