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Building Trust Through Clarity: The Role of Key Audit Matters in Enhancing Financial Reporting Integrity for State-Owned Construction Companies (BUMN Karya)

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Abstract: *This study explores the application and effectiveness of Key Audit Matters (KAMs) in improving financial transparency and audit quality within Indonesia's state-owned construction enterprises (BUMN Karya). A qualitative content analysis methodology was applied to identify recurring themes and trends, linking audit procedures to the risks highlighted in KAM disclosures. The study reveals that KAM disclosures play a critical role in providing stakeholders with insights into complex financial risks, particularly in large-scale infrastructure projects, including asset impairment and recoverability, revenue recognition and contract fulfillment, and valuation and estimation. Furthermore, the analysis shows that auditors undertake procedures to examine management's assumptions, verify compliance with Indonesian Financial Reporting Standards (PSAK), and minimize the risk of material misstatements. However, inconsistencies in the identification and reporting of KAMs, along with limited guidelines, pose challenges for auditors. This research provides valuable insights into the application of KAMs within Indonesia's public enterprises, offering a deeper understanding of how audit procedures address financial reporting challenges. This study contributes to the growing body of knowledge on KAM disclosures, focusing on the unique challenges faced by Indonesia's state-owned construction enterprises. By analyzing the implementation of KAMs in this context, it offers insights into the relationship between audit procedures, transparency, and stakeholder trust, advancing the literature on auditing practices in emerging economies.*

Keywords *– Key Audit Matters, BUMN Karya, Indonesia, Construction Sector, Audit Procedures, Financial Transparency, PSAK Compliance, Public Sector Enterprises*

Abstrak: *Penelitian ini mengeksplorasi penerapan dan efektivitas Key Audit Matters (KAM) dalam meningkatkan transparansi keuangan dan kualitas audit di lingkungan Badan Usaha Konstruksi Milik Negara (BUMN Karya) Indonesia. Metodologi analisis konten kualitatif diterapkan untuk mengidentifikasi tema dan tren yang berulang, menghubungkan prosedur audit dengan risiko yang disorot dalam pengungkapan KAM. Studi ini mengungkapkan bahwa pengungkapan KAM memainkan peran penting dalam memberikan wawasan kepada pemangku kepentingan tentang risiko keuangan yang kompleks, terutama dalam proyek infrastruktur skala besar, terkait penilaian aset, pengakuan pendapatan, dan penilaian penurunan nilai. Selain itu, auditor*

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menggunakan berbagai prosedur untuk memitigasi risiko, memastikan kepatuhan terhadap standar pelaporan keuangan Indonesia (PSAK) dan meningkatkan tata kelola di sektor konstruksi. Penelitian ini memberikan wawasan berharga tentang penerapan KAM dalam perusahaan sektor publik Indonesia, menawarkan pemahaman yang lebih dalam tentang bagaimana prosedur audit mengatasi tantangan pelaporan keuangan. Studi ini berkontribusi pada tumbuhnya pengetahuan tentang pengungkapan KAM, dengan fokus pada tantangan unik yang dihadapi oleh perusahaan konstruksi milik negara Indonesia. Dengan menganalisis implementasi KAM dalam konteks ini, ini menawarkan wawasan tentang hubungan antara prosedur audit, transparansi, dan kepercayaan pemangku kepentingan, memajukan literatur tentang praktik audit di negara berkembang.

Kata Kunci *– Masalah Audit Utama, BUMN Karya, Indonesia, Sektor Konstruksi, Prosedur Audit, Transparansi Keuangan, Kepatuhan PSAK, Perusahaan Sektor Publik*

1. Introduction

The introduction of Key Audit Matters (KAM) in auditor reports marks a significant milestone in financial reporting, representing one of the most substantial developments in auditing over the past nine decades (Kend & Nguyen, 2022). This initiative, driven by the International Auditing and Assurance Standards Board (IAASB), responds to stakeholders' growing demand for more transparent and informative audit reports. In 2015, the IAASB revised its standards to enhance the communication value of audit reports, with KAM disclosures as a critical element. These disclosures focus on the most significant issues identified during the audit, providing deeper insights into the risks and complexities of organizations (IAASB, 2015a).

The push for improved audit quality underscores the profession's commitment to upholding the integrity and relevance of financial statements (Segal, 2019). By identifying and communicating KAMs, auditors can provide more thorough explanations of companies' risks, thereby enhancing overall audit quality. Investors, creditors, and regulators increasingly recognize the importance of transparency in the financial information they receive. The implementation of the International Standard on Auditing (ISA) 701 now mandates that auditors explicitly report KAMs, enabling stakeholders to understand key audit findings and associated risks better. Moreover, KAMs enable auditors to effectively address technological changes impacting business operations, providing insights into how companies manage technology-related risks (Segal, 2019).

KAMs draw attention to aspects of financial statements that the auditor considers most significant, based on their professional judgment for the current audit period (IAASB, 2015a). This initiative, led by the IAASB, aims to enhance the transparency and relevance of audit reports (IAASB, 2015b). In response to stakeholder demands for more contextual information, KAMs provide insights into key areas identified during the audit, moving beyond the traditional binary evaluation of audit opinions (IAASB, 2013). A pivotal change in this regard is the introduction of the International Standard on Auditing (ISA) 701, which requires the disclosure of KAM for listed entities, effective for financial statements ending on or after December 15, 2016 (IAASB, 2015b). ISA 701 aims to enhance audit transparency by providing users with clearer insights into the audit process and auditors' judgments. The IAASB (2012) asserts that the value of an audit report increases when it communicates critical areas of focus, helping to bridge the "information gap" between user expectations and the disclosures provided through audits and financial statements.

The adoption of KAM disclosures is instrumental in ensuring that key stakeholders, including investors, analysts, lenders, and regulators, receive clearer information about the most significant issues addressed during audits. This enhanced transparency fosters greater confidence in organizational financial reporting and aligns the audit process more closely with user expectations (IAASB, 2012).

While many countries, such as Australia, New Zealand, the UK, and several European nations, quickly implemented ISA 701 in 2016 (Kend & Nguyen, 2020), its adoption in Southeast Asia has been more gradual. Indonesia lagged behind its ASEAN counterparts, such as Malaysia, the Philippines, Thailand, and Singapore, which adopted ISA 701 in 2016 (Min & Kee, 2019; AASC, 2017; Kitiwong & Sarapaivanich, 2020; ACRA et al., 2017). Indonesia only made significant progress toward adopting the standard in January 2021, when the Professional Standards Board of Indonesian Public Accountants (DSPAP I) released an Exposure Draft of Audit Standard (AS) 701 on

"Communicating Key Audit Matters in the Independent Auditor's Report" (IAPI, 2021). The full implementation of ISA 701 was scheduled to commence on January 1, 2022, with audits of financial statements for listed entities (IAPI, 2021). The introduction of KAM disclosures in auditor reports is relatively new in many developing countries, sparking considerable interest and debate within the audit literature. In Indonesia, ISA 701 became fully effective for fiscal years ending December 31, 2022, marking a five-year delay compared to neighboring countries, such as Singapore and Malaysia, which implemented the standard in 2016 and 2017, respectively.

Although KAMs have been generally understood, it is still unclear how auditors utilize them to signal specific risks related to complex large-scale projects, political interference, economic viability, and vulnerability to corrupt practices inherent in the construction industry in Indonesia, especially since the era of National Strategic Projects (PSN) (Salim & Negara, 2018). Such risk may only be faced by BUMN Karya, but not by non-BUMN Karya, since BUMN Karya has dual purposes, competing with other players in the market and serving the government (public). For instance, PT Waskita Karya and PT Wijaya Karya are pivotal players in Indonesia's infrastructure development, undertaking large-scale projects such as the Jakarta-Bandung High-Speed Rail and the trans-Java and trans-Sumatra Toll Roads, which collectively account for hundreds of billions of rupiah. Given the critical role of BUMN Karya in national development, ensuring their financial transparency and accountability is paramount, particularly considering the complexities and risks associated with large infrastructure projects. This research systematically analyzed the content of KAMs, specifically in response to a massive, state-driven infrastructure push, such as Indonesia's PSN.

Including KAM in BUMN Karya's audit reports provides stakeholders with valuable insights into the risks and challenges encountered during the audit, thereby enhancing transparency and accountability. However, implementing KAM is not without its challenges. Auditors must exercise significant professional judgment in determining which matters qualify as KAM, and ensuring consistency in reporting across different firms and industries has proven to be a complex task (IAASB, 2012).

Additionally, concerns about the complexity and length of KAM disclosures may limit accessibility for users who lack technical accounting knowledge (ACCA, 2018).

Despite these challenges, Indonesia's adoption of KAM represents a critical step toward aligning its financial reporting practices with global standards. As demands for greater transparency and accountability rise, KAM disclosures are becoming essential tools for building trust among investors and the public. By enhancing the clarity and communicative value of audit reports, KAM plays a vital role in strengthening Indonesia's financial reporting framework and supporting economic stability.

This research aims to explore the implementation and impact of KAM within the BUMN Karya context, focusing on its effectiveness in improving the quality of financial reporting. By utilizing qualitative content analysis of the 2022 and 2023 financial statements of Big 6 BUMN Karya, this study identifies key thematic areas of significant judgment and complexity in BUMN Karya, including impairment and recoverability of assets, revenue recognition and contract fulfillment, and valuation and estimation. In terms of impairment and recoverability, auditors focus on intangible assets, concession rights, Construction Work in Progress (CWIP), and the recoverability of receivables. For revenue recognition and contract fulfillment, auditors emphasize the percentage-of-completion method and long-term contracts. Meanwhile, for valuation and estimation, auditors focus on real estate valuation, business combinations, and liability management. Additionally, the thematic code also reveals audit procedures for assessing management assumptions, validating compliance with accounting standards, and mitigating the risk of material misstatements. All these specific areas thereby provide stakeholders with valuable insights into the financial and operational health of these enterprises.

The findings of this study shed light on the contributions of KAM disclosures to enhancing the communicative value of audit reports by providing signals to stakeholders on the auditor's attention to audit matters and procedures. In this sense, KAM disclosures promote greater transparency and accountability within the country's state-owned enterprises, especially BUMN Karya.

2. Theoretical Underpinnings

This study employs signaling theory and communication theory to examine how auditors implement and communicate KAM disclosures in response to institutional mandates from the IAPI and in alignment with the IAASB. Both frameworks are employed in this study to explain the form of KAM disclosures as strategic signals and communicative acts of auditors, rather than to assess their direct effects on users of financial statements.

2.1 Signaling Theory

The adoption of International Standards on Auditing (ISA) 701 regarding the disclosure of KAM is intended to enhance the communicative usefulness of audit reports, promote greater audit transparency, and strengthen users' trust in audited financial statements (IAASB, 2013). In this sense, the audit report plays a crucial role in reducing the information asymmetry between companies and stakeholders by conveying the auditor's assessment of the reliability and completeness of the information presented (Hussin et al., 2023). The introduction of International Standard on Auditing (ISA) 701, which requires the communication of Key Audit Matters (KAM), is a significant regulatory development. Under ISA 701, auditors must disclose significant audit-related challenges and the procedures implemented to address them, which signals the auditor's diligence, competence, and thoroughness in carrying out their responsibilities (Agana, 2021). By communicating KAMs effectively, auditors provide stakeholders with insights into areas that involve significant management judgment or potential risks, thus enhancing the perceived credibility of the audit report.

Another key aspect of Signaling Theory is that signals should ideally lead to improved perceptions of the company's value. For instance, when companies voluntarily disclose favorable information, such as key metrics or improvements in operational efficiency, they are, in effect, attempting to positively influence investor perceptions and reduce the uncertainty associated with their investment decisions (Astuti et al., 2020). Independent audits reinforce this effort by verifying the accuracy of these disclosures, further solidifying the credibility of the information provided (Dhimadhanu, 2016).

Signaling theory, therefore, plays a pivotal role in understanding how information asymmetry can be mitigated in the context of financial reporting and audits. By strategically utilizing signals, such as transparent KAM disclosures, reputable auditors, and comprehensive reporting, management aims to reduce uncertainty, enhance stakeholder trust, and ultimately improve the perceived reliability and quality of financial information. This improved communication between management, auditors, and stakeholders promotes more informed economic decisions and greater overall market confidence.

2.2 Communication Theory

Communication theory provides a crucial framework for understanding the relationship between Key Audit Matters (KAM) reporting and audit quality. This theory explains communication systems by focusing on their definitions, processes, elements, outcomes, and the interactions between senders and receivers (Smith & Smith, 1971). In the case of KAM, the auditor serves as the sender, while corporations and stakeholders receive the information. Effective communication ensures that messages are conveyed in a way that the receiver fully understands the sender's intended meaning (Detajarutsri et al., 2019). Hence, KAM reporting is a key medium through which auditors communicate complex audit-related issues to companies and their stakeholders.

KAMs are designed to enhance the communicative and informative value of audit reports by highlighting significant matters that require substantial attention during the audit. However, the impact of KAMs on audit quality can vary. On the one hand, disclosing KAMs may introduce risks for auditors, as it draws attention to specific risks and uncertainties that clients may prefer not to emphasize (Reid et al., 2019). Given the sensitivity of certain disclosed matters, this could potentially harm the relationship between the auditor and the client. On the other hand, transparent KAM disclosure can enhance audit reliability, accountability, and transparency by providing stakeholders with a more comprehensive understanding of critical financial reporting matters, thereby strengthening trust in the audit process.

According to communication theory, effective KAM reporting requires clear, readable communication that facilitates consistent interpretation among stakeholders

(Salehi et al., 2022). Courtis (1995) suggests that communication effectiveness is determined by whether the message received is interpreted as the sender intended. The communication must be concise and easy to understand to ensure this consistency. In support of this, theories of information and communication indicate that readability plays a significant role in effective communication. Readable texts are often more effective at conveying intended messages because they require less cognitive effort from readers, thereby improving comprehension (Chang & Stone, 2019).

Readability is a vital aspect of financial reporting, significantly influencing how information is conveyed. Research on the readability of financial and audit reports has produced varied results. While Courtis (1995) found no substantial differences in readability across industry classification, company size, or profitability, studies by Smeuninx et al. (2016) and Efretuei (2021) found that specific sectors, particularly technology and utilities, often employ more complex language. These findings imply that factors such as industry complexity and competitive pressures may affect the clarity of communication to stakeholders (Rahman et al., 2023).

Cultural and linguistic differences also significantly impact the readability of Key Audit Matters (KAMs), particularly in linguistically diverse regions such as ASEAN. Noh (2021) noted that a state's cultural context can affect the readability of annual reports, while Ler (2012) highlighted how rural cultural factors can hinder English proficiency. These insights suggest that language barriers can complicate stakeholder interpretation of KAMs, underscoring the need for communication strategies tailored to the audience's linguistic and cultural characteristics.

Moreover, the size of the audit firm can affect the report's readability. Boritz et al. (2016) found that larger audit firms, like the Big Six, typically produce less readable reports due to their use of technical jargon. Similarly, Chang and Stone (2019) discovered that proposals from Big Four firms were often less accessible than those from smaller firms. These findings highlight the importance of striking a balance between detailed information and readability to communicate KAMs effectively.

Communication theory provides valuable insights into the connection between KAM reporting and audit quality, highlighting the need to minimize information asymmetry. To be effective, KAM disclosures must focus on transparency, clarity, and relevance, ensuring stakeholders have access to the critical information necessary for informed decision-making. This approach not only helps bridge the gap between auditors and stakeholders but also fosters greater trust in the audit process, thereby enhancing the audit's perceived quality.

2.3 Key Audit Matters

Bédard et al. (2016) highlighted a critical need for revising the audit report model due to a lack of transparency in conveying results to shareholders. Historically, audit reports have been criticized for their generic, often superficial nature, leading to a disconnect between stakeholders' perceptions and the audit's actual findings (Humphrey et al., 2006). Before the IAASB integrated KAMs into auditing standards, various regulatory bodies had sought to improve the clarity and quality of auditor reports through multiple revisions (Cordos and Fülöp, 2015). In response to this need, KAMs were introduced to enhance the clarity of audit reports. The standard requires auditors to provide additional information in their reports to explain their professional judgments, which is expected to promote more active engagement from users with the audit committee and management regarding the presented information (Angkawidjaja, 2020). This change fosters greater accountability and reinforces the principle of professional skepticism within the audit process (Kend & Nguyen, 2020). As a result, the incorporation of KAMs aims to elevate the overall quality of audit reports by enhancing their communicative and informative value (Bédard et al., 2019; Christensen et al., 2014; Dogan and Arefaine, 2017; Gutierrez et al., 2018; Sirois et al., 2018).

Previous research has examined the implications of KAMs on audit quality, auditor liability, and stakeholder trust, revealing diverse outcomes across various jurisdictions (Cordoş & Fülöp, 2015; Sahyda, 2019; Abdullatif & Al-Rahahleh, 2020; Suttipun, 2021). For instance, in the context of European countries, Cordoş and Fülöp (2015) found that the introduction of KAM in audit reports bolsters the Theory of Inspired Confidence, providing users with specific information that helps assess whether management's disclosures may be biased. In a similar vein, Suttipun (2021) highlights that KAM reporting enhances the overall quality and transparency of audits in Thailand, thereby increasing the reliability of financial statements and associated information. This is particularly important for stakeholders, including investors, as KAM disclosures provide critical data for making informed investment decisions. In the meantime, Sahyda (2019) suggests that KAMs have significantly contributed to enhanced decision-making and reinforced governance by providing more meaningful insights into financial reporting risks. In addition, larger audit firms tend to disclose more KAMs than their smaller counterparts, reflecting the complexity of the audit landscape (Abdullatif & Al-Rahahleh, 2020; Bepari et al., 2023).

Despite these positive findings, the effects of KAMs on audit quality remain controversial. Li (2017) and Kitiwong and Sarapaivanich (2020) noted that, while KAMs increased transparency in China and Thailand, they did not significantly improve audit quality. This lack of enhancement was attributed to the repetitive nature of KAM disclosures, which tended to become generic and less insightful over time. Similarly, in South Africa, Segal (2019) reported that KAMs, while enhancing transparency, did not result in a perceived improvement in audit quality. Instead, the inclusion of KAMs seemed to widen the expectation gap between auditors and the public, with stakeholders often anticipating more detailed insights than were ultimately provided.

The behavioral implications of KAM disclosures have also been noteworthy. Gold et al. (2020) examined the impact of KAM disclosures on managerial decision-making, particularly regarding aggressive financial reporting. Their research indicated that including KAMs that address such risks led managers to be less inclined to engage in aggressive reporting practices. Notably, KAMs containing firm-specific information were found to have a more substantial deterrent effect on earnings management than those with more generic content.

These mixed findings underscore the importance of the context in which KAMs are implemented, including the nature of the audit, the specificity of disclosures, and stakeholders' expectations. Auditors must carefully consider how KAMs are communicated to maximize their effectiveness, ensuring they provide clear, specific, and meaningful insights into critical audit issues. By doing so, KAMs can be a powerful tool for enhancing audit quality, reducing information asymmetry, and strengthening stakeholder trust in the audit process. Nevertheless, when KAMs are customized to the specific risks and circumstances of each audit, as evidenced by the studies of Gold et al. (2020) and Dogan and Arefaine (2017), they can significantly enhance the overall quality and credibility of financial reporting.

3. Case Background

The implementation of KAM in different regions has varied, with Indonesia facing challenges, especially within its state-owned construction enterprises (BUMN Karya). Indonesia's adoption of KAM has been relatively slow and inconsistent compared to other ASEAN countries, such as Malaysia, the Philippines, and Singapore (Kitiwong & Sarapaivanich, 2020; ACRA et al., 2017). BUMN Karya plays a crucial role in Indonesia's infrastructure and economic development. Still, their financial reporting processes are often complex and subjective due to the nature of large-scale construction projects (IAPI, 2021). Such complexity and subjectivity in management policy can thus pose a challenge for auditors (Roekhudin, 2018).

The construction industry, in which BUMN Karya operates, is characterized by high risk and complexity, requiring auditors to make challenging professional judgments (IAASB, 2015b). These complexities can lead to inconsistencies in how KAMs are identified and disclosed, complicating efforts to ensure clarity and comparability in audit reports. In addition, several financial scandals raise critical concerns about financial accountability and governance within BUMN Karya, ultimately questioning the reliability of financial reporting and the effectiveness of audit procedures (CNN, 2024). Moreover, there is limited research on the specific types of KAMs reported in this sector and the accounting standards most frequently linked to them, which is essential for identifying the areas of financial reporting that pose the most significant challenges to auditors and aiding regulators and practitioners in enhancing the quality of financial disclosures (IAASB, 2015b; AASC, 2017).

Given the critical role of BUMN Karya in Indonesia's economic growth and their active support for the government's initiatives, particularly in executing National Strategic Projects (Proyek Strategis Nasional), it is essential to investigate how KAMs are applied and understood within these enterprises. BUMN Karya, including PT Waskita Karya, PT Wijaya Karya, and PT Hutama Karya, plays a crucial role in developing key infrastructure projects — such as highways, ports, and public facilities — that are vital to national development. Their involvement helps the government achieve its infrastructure objectives, which are crucial for promoting economic growth and enhancing public welfare.

The research addresses key issues, including the unique complexities of financial reporting in the construction sector, the practical implementation of KAM reporting in Indonesia, and the extent to which the disclosed KAMs and related audit procedures meet stakeholder expectations. By focusing on KAM and the audit methodologies used to address it, this study aims to contribute to the development of more robust auditing practices and governance frameworks. Ultimately, the findings aim to support more transparent and reliable financial reporting in BUMN Karya companies, enhancing the overall value and effectiveness of auditor reports in Indonesia.

4. Research Methods

The study employs a qualitative, interpretive approach, leveraging content analysis to systematically examine audit reports and explore the management and disclosure of KAMs. This methodology is particularly suited to understanding the subjective and interpretive aspects of auditors' professional judgments and decision-making processes, especially in the complex context of large-scale infrastructure projects.

The scope of this study is intentionally limited to the textual content of audit reports, to examine how KAMs are implemented and communicated in accordance with the IAPI mandate, rather than exploring stakeholders' perceptions or interpretations. The primary data source comprises secondary data from publicly available audit reports of BUMN Karya entities. By collecting published audit reports containing KAMs of 6 BUMN Karya for 2022 and 2023, this study yields 14 audit reports, as shown in Table 1. These reports provide detailed disclosures of KAMs and the audit procedures applied to address them. The data collection aimed to identify trends and developments in KAM reporting, focusing on critical audit areas and strategies to mitigate risks.

Table 1.
List of BUMN Karya Audit Reports Analyzed (2022-2023)

Company Name	Year	Audit Report (Quartile)
PT Adhi Karya	2022	Q4
PT Pembangunan Perumahan	2022	Q4
	2023	Q4
PT Jasa Marga	2022	Q2
	2022	Q4
	2023	Q4
PT Waskita Karya	2022	Q2
	2022	Q4
PT Hutama Karya	2022	Q4
	2023	Q4
PT Wijaya Karya	2022	Q1
	2022	Q4
	2023	Q3
	2023	Q4

The audit reports were systematically categorized into key audit areas based on recurring themes and patterns to ensure a representative sample. Corresponding audit procedures were analyzed to understand how auditors addressed risks and ensured compliance with auditing standards. This structured categorization comprehensively explored KAM content and the strategies employed to manage financial reporting risks.

A coding framework was developed to systematically categorize KAM disclosures into distinct audit areas and associated procedures. This framework provided a structured approach by classifying disclosures based on three key dimensions. First, the nature of the KAMs was examined, focusing on their complexity, the associated risks, and the specific issues highlighted during the audit. Second, the audit procedures applied to address the identified risks were analyzed, with emphasis on the actions auditors took to mitigate them effectively. Third, the reporting context was considered, including regulatory requirements and industry-specific challenges that shaped the disclosures.

Using qualitative coding techniques, textual data from audit reports were meticulously analyzed to identify recurring patterns and trends. The analysis aimed to establish clear links between KAM disclosures and the corresponding audit procedures. This process illuminated how auditors addressed significant risks and ensured transparency in financial reporting. By focusing on these connections, the study provided valuable insights into the practical application of audit strategies in Indonesia's construction sector.

The analysis followed Krippendorff's content analysis framework, beginning with unitizing and categorizing data to uncover meaningful insights. Audit reports were reviewed line by line, with significant sections tagged and categorized into predefined themes. Particular attention was given to the challenges faced by the construction sector, including managing risks in long-term infrastructure projects and addressing operational uncertainties.

To enhance credibility, the coding framework was informed by existing literature on auditing standards and practices. Archival documents, including prior financial statements and regulatory guidelines, were also reviewed to supplement the analysis. In addition, the lead author conducted the initial coding, and emergent themes were iteratively discussed and validated with the co-author through peer debriefing. The findings were cross-validated through iterative data reviews, ensuring consistency in categorization and interpretation. Using software tools to facilitate efficient categorization and thematic exploration, qualitative coding techniques were applied. This process emphasized the alignment between disclosed KAMs and the associated audit procedures, revealing trends in how auditors manage significant financial risks and comply with standards.

By integrating these methods, the study provides actionable insights into the role of KAMs in enhancing financial transparency, improving audit quality, and fostering stakeholder trust. The research also highlights the critical role of auditors in addressing complex challenges unique to Indonesia's construction sector, contributing to the broader discourse on financial accountability and governance.

5. Findings

Table 2.
Coding Framework for KAM Analysis

Areas	Sub-Areas	Procedures
Impairment and Recoverability	Intangible Assets and Concession Rights	Impairment Testing External Influences
	Construction Work in Progress (CWIP)	Impairment and Recoverability Claims Estimation
	Receivables Recoverability	Legal Disputes Impairment Models
Revenue Recognition and Contract Fulfilment	Percentage-of-Completion Method	Judgements on Progress Progress Disputes
	Variable Considerations	Loss Provisions Cost Adjustments
	Long-Term Contracts	Multiperiod Revenue Misstatements Risks
Valuation and Estimation	Real Estate Valuation	Market-Driven Valuation Net Realizable Value
	Business Combinations	Fair Value Allocation Goodwill Recognition
	Liability Management	Debt Repayment Risks Restructuring Efforts

The Key Audit Matters (KAMs) reported in the financial statements of BUMN Karya companies reflect the intricate and judgment-intensive nature of financial reporting in the construction and infrastructure sectors. These KAMs spotlight significant risks and uncertainties arising from the long-term nature of projects, reliance on subjective estimations, and the influence of fluctuating market and regulatory conditions. To provide a clear understanding of these complexities, this analysis categorizes KAMs into three significant areas: Impairment and Recoverability, Revenue Recognition and Contract Fulfillment, and Valuation and Estimation, with further division into detailed themes and sub-themes for structured examination, as shown in Table 2.

This categorization highlights not only the operational and financial challenges these companies face but also the critical role of auditors in safeguarding financial integrity. Auditors assess management's assumptions, validate compliance with accounting standards, and mitigate the risk of material misstatements, particularly in areas such as impairment testing, revenue recognition, and valuation accuracy. The analysis delves into the specific challenges within each category. It examines auditors' responses and offers a detailed perspective on how these KAMs shape transparency and accountability in financial reporting across BUMN Karya companies. By doing so, it emphasizes the meticulous approach required to navigate the complexities of this sector and uphold stakeholder confidence in these state-owned enterprises.

5.1 Impairment and Recoverability

The impairment and recoverability of assets are critical to the financial reporting of BUMN Karya companies, given the long-term nature of their projects and their reliance on estimates and external factors. The following sections break down key areas of concern within impairment and recoverability.

5.1.1 Intangible Assets and Concession Rights

Intangible assets, such as toll road concession rights, are particularly significant for PT Hutama Karya and PT Jasa Marga, forming a substantial portion of their balance sheets. These concession rights stem from long-term agreements that grant the companies the authority to operate and generate revenue from toll roads. However, the valuation of these assets is inherently complex, requiring detailed projections of future cash flows from toll road operations. Influential factors include traffic volume forecasts, projected toll tariff increases, and estimated maintenance costs. Additionally, external factors, such as government support for financially non-viable toll road sections, significantly affect recoverability assessments.

The accurate valuation of intangible assets is crucial to maintaining stakeholders' trust and ensuring sound decision-making. Overstating these assets could lead to misleading financial statements, compromising transparency and stability. As highlighted in the audit reports, auditors must verify that management's impairment assessments align with PSAK 48 (formerly PSAK 236) and reflect the inherent risks and assumptions underlying the valuations.

5.1.1.1 Impairment Testing

The impairment testing of toll road concession rights at PT Hutama Karya demonstrates the comprehensive audit procedures required for assessing these significant assets. Auditors evaluated management's approach to identifying impairment triggers and ensuring compliance with PSAK 48 (codified as PSAK 236), which governs the impairment of non-financial assets. To validate the accuracy of the recoverable amounts, the auditors tested the mathematical soundness of the discounted cash flow (DCF) models employed by management. Sensitivity analyses were conducted on critical assumptions, including discount rates and projected cash flows, to assess their reliability and robustness.

A key audit element involved cross-referencing traffic volume forecasts with independent traffic studies to confirm their validity. Additionally, assumptions regarding toll tariff growth were verified against regulatory approvals, thereby reinforcing the credibility of the cash flow projections. These comprehensive procedures were instrumental in enhancing the reliability of the valuation models and mitigating the risk of material misstatements. As explicitly stated in the audit report:

> We checked the mathematical accuracy of the cash flows used in the models. We compared historical budgets with actual results to assess management's ability to forecast the cash flows used in the models accurately… We compared the forecasted toll road traffic to the traffic report issued by the management's expert (Hutama Karya FS of 2023).

This detailed verification process underscored the importance of using reliable data sources and consistent assumptions in impairment assessments.

5.1.1.2 External Influences

The valuation of toll road concession rights relies not solely on internal projections. However, it is also significantly shaped by external factors, particularly government support for toll road sections deemed financially unviable. Auditors critically evaluated management's historical assumptions regarding government support, ensuring that these were reasonable and aligned with relevant regulatory frameworks. As explicitly highlighted in the audit report:

> We assessed management's assumption of the additional government support expected to be received for certain sections of the Sumatera toll road, which are not yet financially feasible based on historical experience, and considered whether management had incorporated all relevant factors and whether the assumptions were aligned with regulatory requirements (Hutama Karya FS of 2023).

The auditors also reviewed the consistency of these assumptions across various toll road sections to identify any potential discrepancies or biases.

This thorough evaluation ensured that external dependencies, such as government commitments, were realistically incorporated into the valuation process. By integrating internal and external considerations, the auditors provided a holistic assessment of the toll road concession rights, ensuring compliance with PSAK standards and safeguarding the credibility and accuracy of the financial reporting process.

5.1.2 Construction Work in Progress (CWIP)

Construction Work in Progress (CWIP) is a crucial asset for companies like PT Adhi Karya and PT Wijaya Karya, representing the costs incurred on ongoing construction projects that have not yet been completed. These projects, often large-scale and complex, are subject to inherent uncertainties, including delays, disputes, and unexpected cost escalations. The potential impairment of CWIP arises when the anticipated recoverable amounts from projects are insufficient to cover their carrying costs. Addressing such impairments is crucial to ensure that the financial statements accurately reflect the economic value of these assets.

The financial significance of CWIP stems from its capacity to influence the reported financial health of these companies. Discrepancies between recorded costs and recoverable amounts arising from project delays, unresolved claims, or unanticipated cost overruns can lead to an overstatement of assets. Auditors rigorously examine management's assumptions and estimates to mitigate these risks, focusing on project-specific documentation, historical trends in claim settlements, and projected costs and revenues. By promptly and precisely addressing potential impairments, auditors help preserve the integrity of financial reporting.

5.1.2.1 Impairment and Recoverability

For PT Adhi Karya, the audit assessed CWIP impairment by reviewing project-specific documents, including construction progress reports, to confirm their relevance to ongoing projects. Auditors tested the recoverable amounts by comparing them with incurred costs and reviewed the sufficiency of impairment allowances. This process involved evaluating historical trends in claim settlements and project delays to ensure that allowances were based on credible data. As stated in the audit report:

> We understand the management's controls and processes for determining the recoverable amount of CWIP LRT and assess the inherent risk of material misstatement by considering the degree of estimation uncertainty and the judgment used in applying the assumptions (Adhi Karya FS of 2022).

This quote reflects the auditor's focus on management's methodology and control processes. By assessing inherent risks of material misstatement, the auditors ensured that the assumptions and estimations made by management were reasonable and aligned with the company's historical data and current conditions. The reference to estimation uncertainty underscores the importance of precision in projecting recoverable amounts for assets such as CWIP, where even minor inaccuracies can significantly affect financial results.

At PT Wijaya Karya, auditors concentrated on high-value CWIP balances, specifically testing projects that accounted for over 55% of the company’s total CWIP. They assessed derecognition and write-offs of CWIP by scrutinizing related contracts and supporting documentation to ensure compliance with PSAK requirements. From the audit reports:

> We evaluated the reasonableness of the allowance for impairment of CWIP by testing its recoverable and loss on write-off amount… for the estimation of the allowance for impairment, we evaluated the adequacy of the allowance for impairment of CWIP applied by the management based on the experience of failed claims (Wijaya Karya FS of 2023).

Focusing on high-value balances helps avoid material misstatements, especially for projects that contribute significantly to the company's CWIP. Testing derecognition and write-offs is critical for validating whether impairments are appropriately recognized and justified. By reviewing past claim performance, auditors assess management's ability to make informed projections, ensuring that future recoverable amounts are realistic and evidence-based.

5.1.2.2 Claims Estimation

Claims management is a critical factor affecting CWIP valuation. Construction projects often generate claims due to contract disputes, cost overruns, or delays. Auditors assessed the management's historical performance in handling claims, differentiating between successful and unsuccessful claims. For PT Adhi Karya and PT Wijaya Karya, auditors validated the assumptions used to estimate the recoverability of current claims by referencing past claim outcomes. The audit reports highlight this process:

> We evaluated the adequacy of the allowance for impairment of CWIP applied by management based on experience with failed claims (Adhi Karya FS of 2022).

This statement highlights the significance of historical data in informing current estimates. By evaluating past failures, auditors gauge the likelihood of successful recoveries in ongoing claims. This process ensures that impairment allowances are neither understated nor overstated, thereby safeguarding the reliability of the financial statements. Additionally, it highlights the auditors' role in maintaining consistency and accountability in management's approach to claim estimations.

5.1.3 Receivables Recoverability

The recoverability of receivables is a significant area of focus for BUMN Karya companies such as PT Hutama Karya and PT Wijaya Karya, given the financial and operational complexities these entities face. Legal disputes and debtors' financial instability exacerbate the challenges in determining the collectability of receivables. These receivables often arise from contractual obligations or project-related transactions, making their accurate valuation critical for maintaining financial integrity. The impairment of receivables is assessed based on legal outcomes, the value of collateral, and the present value of expected future cash flows.

Accurate assessment of receivables' recoverability is crucial, as uncollectible amounts can result in significant write-offs, negatively impacting profitability and liquidity. Furthermore, misstatements in this area can obscure a company's financial risks, undermining stakeholder confidence. Auditors address these risks by evaluating legal opinions, testing assumptions in impairment models, and ensuring compliance with PSAK 71 (codified to PSAK 109), which governs the impairment of financial assets using the expected credit loss (ECL) model. These efforts enhance financial transparency, providing stakeholders with a reliable view of the company's financial position.

5.1.3.1 Legal Disputes

The receivables from PT Cempaka Surya Kencana (CSK) in PT Hutama Karya's accounts underscore the complexities of ongoing legal disputes. Given the uncertainty surrounding the recoverability of these receivables, auditors conducted a detailed review of the external legal counsel's assessment of the case. This assessment included analyzing the probability of favorable legal outcomes and verifying management's estimates for the timing and amount of potential recoveries. As noted in the audit report:

> We assessed the competence, capabilities, and objectivity of the Group's external legal counsels. With the assistance of our internal expert, we assessed the Group's external legal counsel's memorandum on the legal case, which included the counsel's assessment of the win probability and the estimated time to close the case (Hutama Karya FS of 2023).

This procedure reflects the auditors' emphasis on ensuring that external counsel's legal opinions are reliable and objective. By involving internal experts, the auditors add a layer of scrutiny to evaluate the quality of the legal analysis. Cross-checking these assessments with management's estimates ensures that any impairment recognized for these receivables is grounded in sound legal and financial judgment. Alignment with PSAK 71 (now codified as PSAK 109) ensures compliance with the calculation of expected credit losses based on the likelihood of recovery.

5.1.3.2 Impairment Models

For PT Wijaya Karya, auditors focused on the impairment models used to estimate the recoverability of receivables. They tested the consistency of these models across various financial assets, ensuring uniform application of impairment methodologies. This process included comparing the collateral values provided for the receivables with the present value of expected future cash flows to validate the reasonableness of management's estimates. Additionally, auditors ensured that impairment disclosures complied with PSAK 71 (now codified as PSAK 109), which emphasizes the use of forward-looking information in estimating credit losses. The audit report states:

> We evaluated the objective evidence used to estimate impairment loss and assessed its accuracy… We compared the value of collateral provided on financial assets with evaluating the present value of its estimated future cash flows (Wijaya Karya FS of 2023).

This process underscores the auditors' rigorous approach to testing impairment models and ensuring consistency across financial assets. By comparing collateral values with future cash flow estimates, the auditors validated the adequacy of allowances for impairment losses. This ensures that the financial statements reflect a realistic and transparent assessment of the recoverability of receivables. Adherence to PSAK 71 (now codified as PSAK 109) is critical, as it provides a standardized framework for evaluating the credit risks associated with financial assets.

5.2 Revenue Recognition and Contract Fulfillment

Revenue recognition and contract fulfillment are integral components of financial reporting for BUMN Karya companies, particularly given the complexities of managing long-term construction projects. The reliance on the percentage-of-completion (POC) method, adjustments for multi-year contracts, and variable considerations requires careful management judgment and strict adherence to accounting standards, particularly PSAK 72 (codified to PSAK 115). These processes are prone to risks, including misstatements in revenue reporting due to inaccuracies in project progress estimation, unexpected cost variations, and contract modifications. Auditors play a pivotal role in evaluating these areas, ensuring that financial statements accurately present the performance and financial position of these entities.

5.2.1 Percentage-Of-Completion Method

The POC method is widely used in the construction industry, including by PT Waskita Karya, PT PP, and PT Adhi Karya, as it aligns revenue recognition with project progress. While this method provides a more accurate reflection of financial performance, it requires significant management estimates of project completion and costs, introducing the risk of misstatement if those estimates are flawed or unsupported.

Revenue recognition under the POC method relies on accurate and reliable judgments about project progress. Auditors address these risks by evaluating the design and effectiveness of internal controls governing POC calculations. A key part of their audit procedures is conducting site visits to verify construction progress and ensure that reported completion percentages are consistent with actual progress. Additionally, they review subcontractor invoices and work progress reports to verify the accuracy of the financial records. These procedures help mitigate risks of overstated or prematurely recognized revenue, safeguarding the integrity of financial statements.

In disagreements over project progress, as seen with PT Waskita Karya, disputes with project owners can further complicate revenue recognition. Auditors analyze project documentation, including contracts and correspondence, to understand the nature of these disputes and evaluate their potential impact on reported revenues. By examining management's negotiation outcomes and their influence on financial reporting, auditors help ensure that disputes are appropriately accounted for and do not result in misleading financial statements.

5.2.1.1 Judgements on Progress

Auditors verify management's estimates of project progress by examining internal controls and conducting fieldwork. As highlighted in the audit report:

> We gained an understanding and evaluated the design and implementation of key controls for revenue recognition from construction services under the percentage-of-completion method… We evaluated the actual progress of the projects on a sample basis, comparing total costs incurred against the Group's budget plans to assess the reasonableness of the percentage of completion (Pembangunan Perumahan FS of 2022).

This process ensures that internal controls are effectively designed and implemented to calculate the completion percentage accurately. By matching physical progress to reported completion rates, auditors confirm that the financial statements accurately reflect the status of ongoing projects. Reviewing subcontractor invoices further corroborates the financial data, reducing the risk of misstatements. Auditors also analyze financial documentation for inconsistencies in contract fulfillment. As stated in the audit report:

> We visited the projects on a sample basis to verify their existence, and… we examined the revenue recorded in the financial records to assess that the revenue recognized was supported by appropriate evidence (Pembangunan Perumahan FS of 2022).

By conducting site visits and reviewing supporting documentation, auditors verify the authenticity of reported progress and confirm that revenue is only recognized when it is genuinely earned, in accordance with PSAK 72 (now codified as PSAK 115) requirements for revenue recognition.

5.2.1.2 Progress Disputes

Disagreements over project progress between companies and project owners introduce additional risks to revenue recognition. For example, disputes at PT Waskita Karya required auditors to examine project-related documentation, including contracts and correspondence, to understand the nature of the disagreements. The audit report notes:

> We read the contract to understand the specific terms and conditions…. We also evaluated management's assessment on whether provision for liquidated ascertained damages is required through supporting documents such as the construction agreements for the rates, extension of time approvals, and work progress report indicating the reasons for the delay and efforts to catch up for phases whereby actual progress is behind planned progress (Waskita Karya FS of 2023).

This step ensures that disputes are appropriately analyzed, and their potential financial impact is accurately reflected in the financial statements. Auditors assess whether adjustments, such as provisions for penalties or delays, are necessary based on documented evidence. By thoroughly reviewing contractual terms and project progress reports, auditors ensure that disputes do not result in misstated revenue.

5.2.2 Variable Considerations

Variable considerations, including provisions for onerous contracts and adjustments for cost variations, are significant areas of focus in revenue recognition for BUMN Karya companies. These considerations add complexity to financial reporting due to their reliance on robust estimation processes and adherence to accounting standards, such as PSAK 72 (now codified as PSAK 115). In large-scale construction projects, the dynamic nature of contracts often necessitates provisions and adjustments that can materially impact reported revenues and costs. To address these complexities, auditors perform detailed procedures to verify the accuracy and appropriateness of these adjustments, ensuring compliance with applicable standards and reflecting the economic realities of the contracts.

5.2.2.1 Loss Provisions

Provisions for onerous contracts represent a critical risk for companies like PT Hutama Karya. These arise when the costs of fulfilling a contract exceed the expected economic benefits, necessitating recognition of a provision for the loss. Auditors evaluate these provisions by reviewing management's estimates and cross-checking them against contractual terms, historical data, and performance trends. As stated in the audit report:

> We tested the mathematical accuracy of the expected margin of the projects. The excess of costs to fulfill the contracts over the remaining consideration expected

> to be received was recognized as a provision for onerous contracts (Hutama Karya FS of 2023).

This detailed testing ensures that the recognized provision accurately reflects the contract's economic reality. By validating cost projections and expected revenues, auditors ensure the provision is sufficient and not understated, thereby mitigating the risk of material misstatement.

Delay penalties are another essential consideration within loss provisions. These penalties are evaluated to confirm alignment with the underlying contractual agreements. According to the audit report:

> We assessed the consideration expected to be received, including the impact of potential delay penalties, by understanding management's assessment of contract value variations and referencing supporting documents (Hutama Karya FS of 2023).

This assessment ensures that penalties for delays are appropriately accounted for, protecting the accuracy of reported liabilities and ensuring compliance with PSAK 72 (codified as PSAK 115).

5.2.2.2 Cost Adjustments

Contract modifications often result in changes to cost projections, which can significantly impact revenue recognition. For PT Hutama Karya, these adjustments require meticulous evaluation to ensure they are based on reliable data and accurately reflected in financial statements. Auditors perform extensive procedures to validate these modifications. As outlined in the audit report:

> We assessed the accuracy and completeness of management's projected fulfillment costs for the remaining contract period under the agreement by comparing them to the budget. We assessed whether the basis of the projected fulfillment cost was supportable by testing supporting documents on a sample basis (Hutama Karya FS of 2023).

By verifying the accuracy of cost adjustments through supporting documents, auditors ensure that changes to projected revenues and expenses align with contractual terms and actual progress. This reduces the risk of overstating or understating revenue, ensuring that financial statements accurately represent the company's financial position. This procedure ensures that revenue adjustments arising from changes in contract terms are accounted for accurately, in accordance with PSAK 72 (codified as PSAK 115) requirements for recognizing variable considerations.

5.2.3 Long-term Contracts

Long-term construction contracts, which often span multiple accounting periods, present distinctive challenges in revenue recognition. Companies such as PT Adhi Karya, PT Waskita Karya, and PT PP rely on detailed projections and robust methodologies to align revenue recognition with project milestones and completion percentages. However, the inherent subjectivity and complexity of these projections introduce risks, including premature or delayed revenue recognition, which can significantly distort financial reporting. PSAK 72 (now codified as PSAK 115) governs the accounting for such contracts, ensuring that revenue is recognized only as performance obligations are fulfilled.

5.2.3.1 Multiperiod Revenue

For companies like PT Perumahan Pembangunan, revenue recognition under long-term contracts requires projecting revenues over extended periods based on ongoing project milestones. This process involves a careful balance of historical data and forward-looking assumptions. As described in the audit report:

> On a sample basis, we evaluated the actual progress of the projects by comparing total costs incurred with the Group's budget plans to assess the reasonableness of the percentage of completion (Perumahan Pembangunan FS of 2022).

Auditors validate management’s revenue forecasts by comparing them with project milestones and historical performance trends. This alignment is critical to ensure that revenue recognition accurately reflects the project's progress, avoiding premature recognition that may overstate earnings or delayed recognition that may understate financial performance.

To further ensure compliance, auditors verify that revenue recognition complies with PSAK 72 (codified as PSAK 115), which mandates revenue recognition over time when specific performance obligations are satisfied. This standard helps ensure that financial statements present a true and fair view of the company's operational performance over the contract's life.

5.2.3.2 Misstatement Risks

The subjective nature of percentage-of-completion (POC) calculations significantly increases the risk of revenue misstatements, particularly for companies like PT Waskita Karya and PT PP. These risks are amplified when delayed project approvals or changes in contract terms affect revenue recognition. As highlighted in the audit report:

> We gained an understanding and evaluated the design and implementation of key controls for revenue recognition from construction services under the percentage-of-completion method… We visited the projects on a sample basis to verify their occurrence (Perumahan Pembangunan FS of 2022).

By reviewing internal controls and physically verifying project progress, auditors help ensure that revenue recognition aligns with actual project performance. They also assess whether delays or contract modifications have been appropriately reflected in the financial statements. This level of scrutiny is essential for maintaining the accuracy and reliability of financial reporting. Furthermore, as noted in the audit report, "We obtained the revenue details from construction services and compared the amount with the revenue in the financial records" (Perumahan Pembangunan FS of 2022).

This comparison ensures consistency between reported revenues and actual contract performance, safeguarding against material misstatements that could mislead stakeholders.

5.3 Valuation and Estimation

Valuation and estimation are integral to the financial reporting of BUMN Karya companies, reflecting their ability to accurately assess the value of assets and liabilities. These processes are crucial for presenting a fair and transparent view of the company's financial health and performance. Key areas include real estate valuation, business combinations, and liability management. Each area involves complex calculations, external dependencies, and adherence to PSAK standards, particularly PSAK 16 (codified to PSAK 216) and PSAK 14 (codified to PSAK 202). These standards guide the valuation process, ensuring that financial statements comply with Indonesian accounting requirements and provide stakeholders with reliable, consistent information. Auditors play a vital role in scrutinizing these valuations, testing their validity, and ensuring compliance with relevant accounting principles.

5.3.1 Real Estate Valuation

Real estate assets form a substantial portion of the balance sheets of companies such as PT Hutama Karya. These assets require careful valuation, influenced by market conditions, pricing trends, demand, and the physical state of the properties. Accurate valuation is critical to avoiding misstatements that could mislead stakeholders or distort the company's financial stability. The application of PSAK 14 (codified to PSAK 202) and PSAK 16 (codified to PSAK 216) provides the necessary framework for these valuations.

5.3.1.1 Market-Driven Valuation

PSAK 16 (codified as PSAK 216) applies to properties classified as fixed assets, ensuring that assets are recorded at their historical cost or revalued amount, less accumulated depreciation and impairment losses. For real estate assets being developed or held for sale, PSAK 14 (codified as PSAK 202) becomes relevant, requiring measurement at the lower of cost or Net Realizable Value (NRV). The NRV is the estimated selling price in the ordinary course of business minus the costs of completing and selling the assets. For PT Hutama Karya, market-driven valuation involves external valuation experts. As stated in the audit report:

> We assessed the competence, capabilities, and objectivity of the Group's external valuers. We reviewed their work in estimating the net realizable value of the real estate assets (Hutama Karya FS of 2023).

Auditors evaluate the qualifications and independence of external experts to ensure unbiased and professional appraisals. By validating assumptions, such as unit pricing and demand trends, auditors confirm that these valuations reflect prevailing market conditions. This review mitigates the risk of overstatement or understatement of asset values, ensuring compliance with PSAK 14 (codified to PSAK 202) for inventory-type assets and PSAK 16 (codified to PSAK 216) for fixed assets.

5.3.1.2 Net Realizable Value

Under PSAK 14 (codified as PSAK 202), real estate assets classified as inventory must be measured at the lower of cost or NRV. This standard ensures that assets are not carried at inflated values, protecting the integrity of the financial statements. Auditors conduct site inspections to verify the physical condition of these properties, as noted in the audit report:

> We conducted the Group's physical observations at a sample of locations to assess the condition of the real estate assets… We tested the mathematical accuracy of management's calculation of the net realizable value against real estate assets (Hutama Karya FS of 2023).

These procedures provide a direct, verifiable basis for valuation, ensuring that the NRV accurately reflects the asset's ability to generate revenue. Additionally, auditors test the consistency of data used by external valuers, comparing it with management's records, as highlighted in the audit report:

> We tested the consistency of the data used by external valuers, including unit sizes, by comparing them with management's source data (Hutama Karya FS of 2023).

This step ensures that all data used in valuation calculations is accurate, consistent, and free of errors, in line with PSAK 14 (codified to PSAK 202) for inventory and PSAK 16 (codified to PSAK 216) for fixed assets.

5.3.2 Business Combinations

Business combinations are a significant focus for BUMN Karya companies, particularly PT Jasa Marga, which often engages in acquisitions and share transfers. These transactions require rigorous evaluation to allocate fair values to acquired assets and liabilities accurately and to appropriately recognize goodwill in compliance with PSAK 22 (codified as PSAK 103). Proper accounting treatment ensures that the financial statements reflect the economic realities of these transactions and provide stakeholders with a transparent view of the company's strategic growth initiatives.

5.3.2.1 Fair Value Allocation

Allocating fair values to assets and liabilities acquired in business combinations is a key component of financial reporting. For PT Jasa Marga, auditors play a critical role in validating these allocations to prevent potential misstatements. As outlined in the audit report:

> We reviewed the shareholders' agreements, shareholders' meeting resolutions, and legal documents related to the share transfer to understand the key terms and conditions for evaluating the appropriateness of the accounting treatment for this transfer (Jasa Marga FS of 2023).

Auditors ensure that the terms of the agreements are accurately reflected in the fair value allocations. This involves confirming the valuation methodologies and assessing the underlying assumptions used in cash flow projections. For instance, projections must align with the actual economic benefits expected from the acquired entities, avoiding the risks of overstatement or understatement of values. These procedures are guided by PSAK 22 (codified as PSAK 103), which emphasizes fair value measurement to clearly depict the financial impact of acquisitions.

Additionally, as highlighted in the audit report:

> We reviewed the measurement model, cash flow projections, assumptions, and data used in these measurements. We engaged internal specialist teams to evaluate the reasonableness of the model, methods, and assumptions underlying fair value measurements (Jasa Marga FS of 2023).

This step involves detailed scrutiny of the valuation models, ensuring they comply with the standards required under PSAK 22 (codified to PSAK 103). Internal specialists contribute by providing expertise in assessing the robustness of the methodologies and the consistency of assumptions with market and industry conditions. By doing so, auditors help ensure that fair value allocations accurately represent the assets and liabilities acquired.

5.3.2.2 Goodwill Recognition

Goodwill, representing the excess of the acquisition price over the fair value of net identifiable assets, is another complex area in business combinations. Accurate measurement and recognition are critical to complying with PSAK 22 (formerly PSAK 103), which mandates specific procedures for recognizing goodwill or gains on bargain purchases. For PT Jasa Marga, auditors carefully evaluate the methodologies applied to calculate goodwill and ensure that any remeasurements of previously held interests are appropriately accounted for. As noted in the audit report:

> We evaluated management's assessment of the competence, objectivity, and capability of the external valuer appointed by JTT to determine whether factors are causing bias in the fair value measurement (Jasa Marga FS of 2023).

The involvement of external valuation experts requires auditors to verify their independence and competence to prevent biases that could lead to errors in goodwill calculation. This step ensures the reliability of the valuation process and strengthens stakeholder confidence in the reported figures. Furthermore, the report states:

> We evaluated the accuracy and sufficiency of the disclosure of business combination transactions and their disclosure in the consolidated financial statements (Jasa Marga FS of 2023).

Disclosures about business combinations, including the recognition and treatment of goodwill, are critical for transparency. Auditors ensure that these disclosures provide stakeholders with a comprehensive understanding of the acquisition's financial implications. This is particularly important for PT Jasa Marga, where the strategic significance of acquisitions must be clearly communicated.

5.3.3 Liability Management

Liability management is a vital aspect of financial stability for companies like PT Wijaya Karya, which face significant challenges in addressing short-term liabilities and implementing effective restructuring strategies. Proper management of liabilities is essential to ensure that the company meets its financial obligations while maintaining stakeholder confidence. This area, connected to PSAK 1 (codified to PSAK 201), emphasizes the proper classification and disclosure of liabilities, particularly in cases involving maturity risks and restructuring efforts.

5.3.3.1 Debt Repayment Risks

PT Wijaya Karya’s financial health is intricately tied to its ability to manage and repay maturing liabilities. Auditors evaluate the company’s capacity to meet these obligations by analyzing creditor negotiations and related supporting documents. As highlighted in the audit report:

> We have checked the supporting documents and discussed with the Company for any short-term liabilities that will mature. We have checked the status of negotiations for any short-term liabilities that will mature before the interim consolidated financial statements are approved for issuance (Wijaya Karya FS of 2023).

This review ensures that the company's financial obligations are adequately disclosed and managed. Auditors assess whether the company's cash flow projections align with its repayment schedules, mitigating the risk of default. By scrutinizing creditor agreements, auditors identify potential risks that could compromise the company's financial position, thereby providing stakeholders with a transparent view of its debt-repayment strategies.

Additionally, auditors assess compliance with PSAK 1 (codified to PSAK 201), which mandates the clear presentation and classification of liabilities into current and non-current categories. This classification helps stakeholders understand the immediacy of the company's financial obligations and its capacity to address them.

5.3.3.2 Restructuring Efforts

PT Wijaya Karya has pursued liability restructuring initiatives to improve its financial stability amid debt repayment challenges. Auditors examine the effectiveness of these restructuring efforts, focusing on their success rates and potential impacts on the company's current obligations. According to the audit report:

> We have reviewed the adequacy of short-term liabilities that will mature and have been disclosed in Notes 25, 26, 32, 36, and 37 to the interim consolidated financial statements (Wijaya Karya FS of 2023).

Auditors evaluate whether restructuring disclosures are complete, accurate, and compliant with PSAK standards. This involves analyzing the outcomes of previous restructuring efforts and their implications for future liabilities. For example, successful negotiations with creditors may reduce the risk of asset forfeiture or default, while failures could significantly impact the company's liquidity and financial health.

Auditors provide stakeholders with an independent perspective on the company’s liability management strategies through these evaluations. This assessment enables stakeholders to evaluate the company's ability to maintain financial stability and fulfill its obligations amid evolving economic conditions.

6. Discussion, Conclusion, and Limitation

This study highlights the pivotal role of KAM disclosures in enhancing the transparency, accuracy, and reliability of BUMN Karya's financial reporting. In this sense, by addressing key areas of significant judgment and complexity identified in this research — primarily impairment and recoverability of assets, revenue recognition and contract fulfillment, and valuation and estimation — KAMs provide stakeholders with valuable insights into the financial and operational health of these enterprises. Additionally, the thematic coding highlights the audit steps used to test management assumptions, confirm compliance with accounting standards, and address potential material misstatements. These findings support the idea that the disclosures also enhance the communicative value of audit reports by effectively translating complex audit procedures into accessible and actionable information, thereby fostering trust and strengthening accountability among investors, regulators, and the public (see Christensen *et al.,* 2014; Gutierrez *et al.,* 2018; Sirois *et al.,* 2018; Bédard *et al.,* 2019.

KAM disclosures fundamentally address the information asymmetry between management and stakeholders. According to Signaling Theory, management, as the signal sender, leverages KAM disclosures to communicate significant areas of financial judgment and complexity, thereby offering stakeholders confidence in the company's commitment to high-quality reporting standards. For instance, the impairment testing of toll road concession rights at PT Hutama Karya illustrates how auditors ensure transparency by disclosing critical assumptions such as discount rates, cash flow projections, and traffic volume forecasts. As Agana (2021) argues, making such disclosures allows auditors to signal the robustness of their procedures and the reliability of the financial statements, thereby reducing stakeholders' uncertainty.

The application of communication theory further reinforces the importance of KAMs in clearly and comprehensively transmitting complex audit information (Salehi *et al.,* 2022). As found in the audit report of BUMN Karya, the recoverability of receivables exemplifies the communicative role of auditors in clarifying legal disputes and associated financial risks. Auditors assessed external legal counsel's memorandum and evaluated management's assumptions about the likelihood and timing of recoverable amounts, ensuring that these disclosures provided a complete and accurate picture. These efforts ensure that complex matters are effectively communicated to stakeholders, enabling them to understand the financial implications and underlying risks clearly. Another example is that auditors validate revenue recognition calculations by conducting site visits, reviewing project milestones, and cross-referencing subcontractor invoices with reported progress. These thorough procedures align with Communication Theory by ensuring that stakeholders receive reliable and comprehensible information about the company's financial performance and project progress.

The findings reveal that KAM disclosures, guided by the principles of Signaling and Communication Theories, enhance the transparency and credibility of financial statements by reducing information asymmetry and fostering trust. The alignment of these disclosures with PSAK standards, such as PSAK 16 (codified as PSAK 216) for asset valuation, PSAK 48 (codified as PSAK 236) for impairment assessments, and PSAK 72 (codified as PSAK 115) for revenue recognition, ensures consistency with established accounting practices. The integration of these standards within KAM reporting also addresses the unique challenges of the construction industry, where large-scale, long-term projects involve substantial financial complexity and uncertainty.

These findings hold substantial implications for various stakeholders, including investors, regulators, and corporate management. By providing detailed insights into critical financial risks — such as asset valuation, impairment assessments, and revenue recognition —KAM disclosures empower all stakeholders to make more informed decisions. Investors, for example, benefit from a deeper understanding of a company's financial health and operational challenges, enabling them to assess risks and opportunities with greater confidence. For regulators, aligning KAM disclosures with PSAK standards ensures that financial statements adhere to established benchmarks for reliability and comparability. This consistency facilitates regulatory oversight and supports international stakeholders who rely on transparent, standardized reporting for investment and compliance purposes.

The emphasis on clear, structured communication in KAM reporting further strengthens trust among auditors, management, and stakeholders. KAM disclosures create a foundation for improved accountability and ethical governance by reducing information asymmetry. For corporate management, the detailed nature of these disclosures provides an avenue to showcase their commitment to transparency and adherence to sound financial practices, reinforcing confidence in their decision-making and oversight processes. These measures collectively foster a stable financial environment within Indonesia's public construction sector. By addressing complex financial reporting challenges with clarity and rigor, KAMs enhance the integrity of financial reporting, promote stakeholder confidence, and support the broader objective of sustainable financial governance.

Nonetheless, several limitations should be noted. The sector-specific focus on BUMN Karya restricts the generalizability of the findings, as other industries may encounter different reporting and auditing complexities. The qualitative, interpretive nature of the research also introduces potential subjectivity in data analysis. Furthermore, as auditing standards and technologies continue to evolve, future studies are needed to explore how KAM practices adapt to these developments. Finally, given the Indonesian cultural and regulatory context, the findings may not be fully transferable to other jurisdictions; thus, comparative cross-country research could provide a more comprehensive understanding of global KAM disclosure practices.

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