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THE EFFECT OF BALANCED SCORECARD IMPLEMENTATION ON INTERNAL AUDIT EFFECTIVENESS AND PERFORMANCE EVALUATION: A STUDY AT PT BANK RAKYAT INDONESIA - KEDIRI CITY BRANCH

Muhammad Judhanto Eka Bio[1] , Erika Kusuma Wati[2]

[1,2] *Accounting Department, Faculty of Economics and Business, University of Brawijaya, Indonesia*

Abstract. The purpose of this study was to evaluate the impact of Balanced Scorecard (BSC) implementation on internal audit effectiveness and performance appraisal at PT Bank Rakyat Indonesia KC Kediri. A quantitative approach was used using path analysis through Structural Equation Modelling (SEM) based on Partial Least Squares (PLS). Data were collected through a questionnaire survey with employees and management. The convergent validity test results show that all indicators have satisfactory validity and reliability. The research findings show that BSC implementation and performance indicators have a positive effect on organizational performance appraisal, with the internal audit function as a moderating variable that strengthens the relationship between these variables. The study concludes that the integration of BSC in the internal audit system can improve accountability and transparency, and support more proactive and sustainability-oriented decision-making. The results of this study provide valuable insights for public organizations in implementing a more comprehensive performance measurement system.

Keywords: Balance Scorecard, Performance Indicators, Internal Audit, Performance Assessment.

I. INTRODUCTION

The Balanced Scorecard (BSC) has become one of the most influential management tools for measuring organizational performance since its introduction in the 1990s. In the context of internal auditing, the implementation of BSC provides a more comprehensive framework for evaluating various operational and strategic aspects of an organization. This article discusses how integrating the BSC into the internal audit system can improve the effectiveness of performance assessment, particularly in the public sector. One of the main challenges faced by public organizations is a tendency to place too much emphasis on financial control, thereby neglecting other dimensions of performance. This tendency to focus too much on financial control as the main indicator of success often overlooks other equally important dimensions, such as customer satisfaction, internal process efficiency, and innovation and human resource development. This one-sided approach often causes organizations to lose sight of how non-financial elements can contribute significantly to the achievement of long-term strategic goals.

As a result, decisions tend to be reactive and short-term in nature, without considering operational sustainability or the broader impact on stakeholders.

In facing rapid changes and ensuring long-term sustainability, a more holistic measurement system such as BSC is essential. By integrating four main perspectives—financial, customer, internal processes, and learning and growth—BSC provides a comprehensive overview of organizational performance. At PT Bank Rakyat Indonesia (BRI), particularly at the Kediri branch office, the implementation of BSC is in line with the provisions of the Internal Audit Charter, which is based on Financial Services Authority Regulation No. 1/POJK.03/2019. This charter stipulates that the Internal Audit Unit (SKAI) must conduct independent and professional risk-based audits. SKAI is responsible for evaluating the effectiveness of internal control systems and compliance with regulations, as well as providing improvement recommendations to management. Thus, the implementation of BSC in the context of audit at BRI KC Kediri not only enhances overall performance assessment but also ensures that all performance dimensions, both financial and non-financial, are considered in a balanced manner (OJK Audit Charter, 2019). This helps BRI KC Kediri make more proactive and long-term sustainability-oriented decisions. This approach allows the company to view performance not only from a financial perspective but also from an operational and innovation perspective, which helps understand how various elements interact to achieve strategic objectives (Ritonga, 2023). Additionally, the BSC enables the organization to respond to changes in the business environment by monitoring relevant performance indicators, identifying market trends, and understanding customer needs, thereby allowing for swift corrective actions when necessary.

BSC also supports organizational sustainability by integrating environmental and social factors into performance measurement. This ensures that organizations do not only focus on short-term profits but also consider the long-term impact on society and the environment, which is important for building a positive reputation and trust among stakeholders. BSC enhances employee engagement by presenting strategic objectives in a measurable and easily understandable format, so that each individual feels their contributions support the organization's vision (Kusnanto, 2022). This, in turn, fosters a culture of innovation and continuous learning. With more comprehensive information about performance, BSC helps management make better decisions by aligning operational actions with long-term objectives.

Internal audit and organizational performance assessment are two key pillars for supporting sustainability and the achievement of organizational strategic objectives. Internal audit serves as a crucial oversight mechanism within an organization, ensuring optimal performance and compliance with applicable regulations. One of its primary roles is to evaluate the effectiveness of an organization's operations. By analyzing various processes and activities, auditors can identify areas that require improvement and help organizations increase efficiency and effectiveness in achieving their strategic objectives. In addition, internal audit also plays an important role in ensuring the organization's compliance with external regulations and applicable internal policies, including compliance with industry standards and government regulations . This reduces the risk of non-compliance that can harm the organization both financially and in terms of reputation. Another function of internal audit is risk management, where auditors help organizations identify, analyze, and manage various types of risks, including operational, financial, and reputational risks (Melhem, 2024). Through objective and transparent reports, internal audit also enhances accountability and transparency in managerial decision-making, which ultimately builds stakeholder trust.

Internal audits contribute to organizational sustainability by supporting the implementation of effective sustainability strategies. Internal audits help evaluate environmental, social, and governance (ESG) initiatives (Oliveira et al., 2022) and assess how these initiatives are integrated with overall business objectives. This process ensures that organizations not only meet regulatory obligations but also contribute positively to society and the environment. Internal audits serve to assess the continuous improvement initiatives taken by organizations. Through continuous evaluation, internal audits provide useful feedback to organizations to improve their practices in order to achieve sustainability goals. Equally important, internal audits also promote the creation of an ethical and responsible culture within the organization. Through rigorous oversight and independent evaluation, internal audits ensure that all employees act in accordance with the company's values and consider the social impact of every decision made.

Research by (Hegazy et al., 2022) highlights that although external and internal reviews have been a concern, performance measurement and the use of new benchmarks have only begun to gain more attention in recent years. By adopting BSC, audit firms can understand the main drivers of performance and formulate strategies that can create competitive advantages. This study also aims to develop a BSC-based framework that can be implemented at BRI KC Kediri, while exploring how the designed indicators can improve overall audit performance. Another study by (Kumar et al., 2023) underscores the importance of a comprehensive performance measurement system in banking organizations, which often focus too much on financial control aspects. The implementation of BSC helps organizations improve accountability and transparency through more comprehensive performance measurement. This study aims to explore the application of BSC as a strategic tool to help organizations achieve their vision and mission through more integrated performance improvement.

II. LITERATURE REVIEW

A. Balanced Scorecard as a Performance Measurement Tool

The Balanced Scorecard (BSC) has become one of the most widely used strategic management tools for measuring overall organizational performance. The BSC combines financial and non-financial performance measurements through four main perspectives: financial, customer, internal processes, and learning and growth. This approach provides a more holistic view of organizational success by emphasizing the relationship between strategic objectives and operational performance. Previous research by (Hegazy et al., 2022) highlights that the BSC not only functions as a measurement tool but also as a framework for understanding the key drivers of performance. By integrating key performance indicators (KPIs) from various perspectives, the BSC enables organizations to identify strengths and weaknesses in the implementation of organizational strategies. In the context of PT Bank Rakyat Indonesia KC Kediri, the implementation of BSC is relevant to enhance accountability and transparency in performance measurement. Research (Sanchez-Marquez et al., 2018) states that the selection of appropriate KPIs is crucial to ensure that BSC can provide an accurate picture of organizational performance.

By using BSC to set strategic objectives for comprehensively assessing organizational performance, BRI can create a strong feedback cycle for continuous improvement. In addition, this strategy focuses not only on financial results but also on other important aspects such as

customer satisfaction and operational efficiency. This helps the organization create a more responsive and sustainable environment, while maintaining operational quality and long-term strategy.

B. The Role of BSC in Internal Auditing

Internal audits aim to evaluate the effectiveness of internal control systems and organizational processes in achieving strategic objectives. However, traditional audit approaches often focus only on end results, such as financial opinions, without considering the underlying processes and strategies. In this context, BSC is a relevant tool to help auditors evaluate organizational performance in a more integrated manner. According to research (Kumar et al., 2023), the application of BSC in internal audits enables auditors to understand the relationship between organizational strategy and its implementation. This provides auditors with a more comprehensive view, enabling them to provide more relevant recommendations for improving organizational performance.

The implementation of the Balanced Scorecard (BSC) in internal audits in the financial sector, as researched by Kusnanto (2022), can be seen in how large banks in Indonesia, such as Bank Mandiri, BCA, and BNI, have integrated BSC with their risk management and internal audit processes. In this context, the BSC is used to evaluate performance through four main perspectives: financial, customer, internal processes, and learning and growth. At PT Bank Rakyat Indonesia (Persero) Tbk., the implementation of the BSC is relevant in strengthening risk-based audits, supporting the principles of Good Corporate Governance (GCG), and ensuring compliance with regulations from the Financial Services Authority (OJK) and international standards such as Basel III. BSC assists BRI's internal audit in identifying potential risks, such as fraud or financial reporting errors, while enhancing the effectiveness of internal controls and strategic decision-making. This is supported by research (Hegazy et al., 2022) indicating that BSC can provide significant added value by linking an organization's strategic and operational objectives.

C. Performance Measurement Challenges in the Public Sector

Public organizations often face challenges in measuring performance comprehensively. An excessive focus on financial control often neglects other dimensions, such as customer satisfaction, process efficiency, and human resource development. Research (Kumar et al., 2023) highlights that the implementation of BSC can help public organizations develop more balanced performance indicators, thereby improving accountability and transparency in their operations. In public organizations, performance measurement using BSC can include strategic objectives such as improving services to the community, operational efficiency, and internal capacity development. This perspective helps public organizations not only fulfill their financial obligations but also provide added value to stakeholders.

The public sector often faces resource constraints, both in terms of budget and human capacity, which hinder the measurement of non-financial performance, such as service quality and public satisfaction (Afonso et al., 2024) shows that resource constraints, both in terms of budget and human capacity, cause a gap between long-term strategies and short-term operational implementation. PT Bank Rakyat Indonesia (Persero) Tbk. (BRI) has implemented the Balanced Scorecard (BSC) to address these challenges by providing an integrated framework for measuring performance through four perspectives: financial, customer, internal processes, and learning and growth. The BSC enables BRI to identify strategic priorities,

allocate resources efficiently, and improve operational accountability and effectiveness. With this approach, BRI can bridge the gap between long-term strategy and operational execution to achieve sustainable goals.

D. Benefits of BSC Integration in Audit and Performance Assessment

The integration of BSC into internal audit systems has significant benefits for organizations in both the public and private sectors. According to (Hegazy et al., 2022), this integration enables organizations to better identify strategic and operational risks, as well as enhance auditors' ability to evaluate the effectiveness of strategy implementation. As a result, BSC not only improves audit quality but also helps organizations achieve competitive advantage through more effective performance measurement.

The integration of the Balanced Scorecard (BSC) into the internal audit system provides significant benefits to organizations by improving the quality of performance evaluation and strategy effectiveness (Hegazy et al., 2022); (Zopounidis & Lemonakis, 2024). By providing a holistic framework that encompasses four key perspectives (financial, customer, internal processes, and learning and growth), BSC enables organizations to gain a more comprehensive view of their performance. This helps management identify relevant key performance indicators (KPIs) and facilitates a more in-depth evaluation of strategic target achievement. PT Bank Rakyat Indonesia (Persero) Tbk., the implementation of BSC supports risk-based auditing, enabling a comprehensive evaluation of the effectiveness of strategies and internal controls. BSC also helps BRI align cross-unit objectives, improve coordination, and ensure that each department contributes to the organization's vision and mission. As a result, BRI can enhance accountability, transparency, and operational efficiency in addressing dynamic business challenges (Irawan, 2021).

Research Framework

A research framework is a conceptual structure used to formulate and explain the relationships between variables studied in a study. This framework serves as a guide in designing research, collecting data, and analyzing research results. The research framework in this study links three main variables: Balanced Scorecard (BSC) & Performance Indicators as exogenous variables, internal audit as a moderating variable, and performance appraisal as a dependent variable. Therefore, the research framework in this study is illustrated as follows:

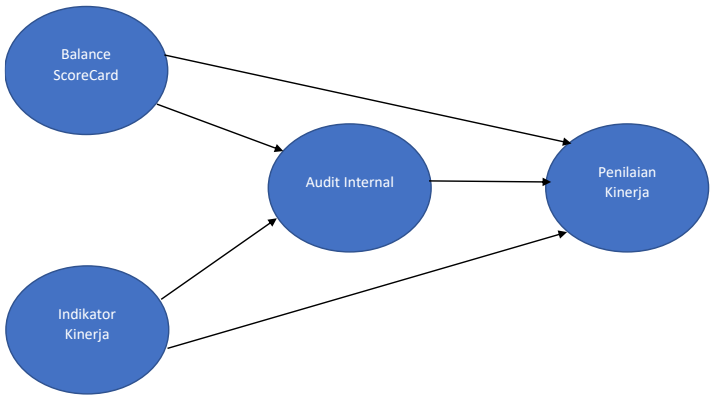

Illustration of the Conceptual Framework 2.5

III. RESEARCH METHODOLOGY

A. Research Variables

This study aims to analyze the influence of the Balanced Scorecard (BSC) and performance indicators on organizational performance assessment, with internal audit as a moderating variable. The research variables are grouped into three main categories:

1. Exogenous Variables: Balanced Scorecard and Performance Indicators
   The Balanced Scorecard (BSC) is a strategic management framework that integrates performance measurement through four main perspectives: financial, customer, internal processes, and learning and growth. These perspectives are used to assess organizational performance holistically, in line with the findings of Hegazy et al. (2022), which emphasize the function of BSC as a strategy formulation tool and managerial control tool. Key Performance Indicators (KPIs) are developed based on these four perspectives to measure an organization's strategic achievements.
2. Moderating Variable: Internal Audit
   Internal audit acts as a moderating variable that strengthens the relationship between BSC implementation and performance assessment results. The function of internal audit is not limited to compliance and control, but also provides a comprehensive evaluation of business processes and organizational strategies. This role supports the creation of accountable and transparent organizational governance.
3. Dependent Variable: Organizational Performance Assessment
   Organizational performance assessment is a dependent variable that reflects the success of strategy implementation through measurements of financial results, process efficiency, customer satisfaction, and human resource development. By integrating internal audit results into the BSC framework, organizations can improve the effectiveness of their performance evaluation systems.

B. Research Design

This study uses a quantitative approach with path analysis based on Structural Equation Modeling – Partial Least Squares (SEM-PLS). This type of research was chosen to evaluate in depth the relationship between variables in the structural model, particularly the influence of the Balanced Scorecard (BSC) as an exogenous variable on organizational performance assessment as a dependent variable, as well as the role of internal audit as a moderating variable. The use of SEM-PLS is considered appropriate because it can handle complex models, accommodate data that does not meet normality assumptions, and produce accurate and informative estimates of the relationships between variables.

This study was conducted at PT Bank Rakyat Indonesia (Persero) with a population comprising employees and management who understand the performance measurement system and internal audit process. This population includes various job levels such as managers, internal auditors, and operational staff. To ensure the relevance and representativeness of the data, the sampling technique used was purposive sampling, which involves selecting respondents based on specific criteria, including work experience and direct involvement in the implementation of the BSC and the organization's internal audit process.

The research sample consisted of individuals who met the criteria and were selected systematically to represent diverse perspectives within the organization. Thus, the results of the study are expected to provide a comprehensive and accurate picture of the influence of

BSC on organizational performance appraisal through the effectiveness of internal audit as a moderating variable.

Data collection methods were carried out through two main sources, namely primary data and secondary data:

1. Primary data was obtained through a questionnaire designed in the form of a five-point Likert scale and distributed to respondents within PT Bank Rakyat Indonesia (Persero). This questionnaire was designed to measure respondents' perceptions of the implementation of the Balanced Scorecard, performance indicators, and the role of internal audit in the organizational performance evaluation process.
   The measurement scale of the questionnaire is as follows:

Statement	Score
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

Table 3.1 Questionnaire Measurement Scale

2. Secondary data was collected through documentation studies, including annual reports, internal audit reports, organizational policies, and other official documents relevant to the research topic. The collection of secondary data aims to support the validity of the results obtained from primary data and enable triangulation of information, so that the interpretation of findings becomes stronger and more reliable.

Overall, this research design is constructed to empirically test the relationship between the research variables and provide practical contributions to the development of a Balanced Scorecard-based organizational performance appraisal system and internal audit.

C. Evaluation of the Measurement Model and Hypothesis Testing

This study uses Structural Equation Modeling–Partial Least Squares (SEM-PLS) as an analytical tool to evaluate the relationship between variables in the research model. The SEM-PLS method was chosen because it has advantages in handling complex models, non-normally distributed data, and relatively small sample sizes. Model evaluation was carried out through several stages of testing as follows:

1. Convergent Validity Test
   Convergent validity helps ensure that the collected data accurately reflects the variables being measured. In the context of Balanced Scorecard (BSC) implementation and internal audit research, convergent validity assists management in making better data-driven decisions. Research results with high validity will increase stakeholders' confidence in the findings and recommendations generated.
2. Discriminant Validity Test
   Discriminant validity testing is a method used to assess the extent to which a construct can be distinguished from other constructs in a study. In the context of SEM PLS (Structural Equation Modeling - Partial Least Squares) analysis, this test is important to ensure that the indicators used in a construct are not highly correlated with indicators

from other constructs, thereby providing clarity and uniqueness in measurement (Hair, J. F., et al., 2021). t validity testing in this research context is crucial to ensure that each variable—BSC as the exogenous variable, internal audit as the moderating variable, and performance evaluation as the dependent variable—can be measured independently without any overlap among indicators. By conducting t validity testing, this study can provide more accurate and relevant results in evaluating the relationships among these variables.

3. Multicollinearity Test
   Multicollinearity testing in the context of SEM PLS (Partial Least Squares) aims to ensure that there are no strong linear relationships between independent variables in this model test. Thus, multicollinearity testing can interfere with regression coefficient estimation, which has the potential to produce inaccurate conclusions in the study. In this study, multicollinearity testing was conducted to ensure that the variables used, such as the Balanced Scorecard (BSC), performance indicators, and internal audit, were not significantly correlated with each other, so that each independent variable could provide a clear and separate contribution to the dependent variable, namely performance assessment. One of the commonly used methods for detecting multicollinearity is by calculating the Variance Inflation Factor (VIF). A high VIF value, generally above 10, indicates a serious multicollinearity issue, while a value below 5 is considered acceptable.
4. Hypothesis Testing
   The research hypothesis focuses on the effect of implementing the Balanced Scorecard (BSC) on the effectiveness of internal audits and organizational performance assessments, particularly at PT Bank Rakyat Indonesia (Persero). This hypothesis suggests that integrating the BSC into the internal audit system can improve performance assessments by providing a more comprehensive framework for evaluating various operational and strategic aspects of the organization. This study notes that public organizations often place too much emphasis on financial control, thereby neglecting other important dimensions, such as customer satisfaction and process efficiency. By implementing the BSC, it is hoped that organizations can develop more balanced performance indicators and improve accountability and transparency. Thus, this study's hypothesis seeks to demonstrate how BSC can assist PT Bank Rakyat Indonesia in making more proactive and long-term sustainability-oriented decisions, as well as improving the quality of performance evaluation through more effective audit system integration.

IV. RESULTS AND DISCUSSION

This study examines the influence of the variables Balanced Scorecard, Performance Indicators, Internal Audit, and Organizational Performance Evaluation. Data processing in this study used SmartPLS 4 software, where in Structural Equation Modeling Partial Least Squares (SEM-PLS), the variables were grouped into exogenous variables and endogenous variables according to the causal relationships in the model. Exogenous variables are variables that act as predictors or causes in the model and are not influenced by other variables in the model. Endogenous variables are variables that are influenced by one or more exogenous variables. Based on this context, the exogenous variables used in this study are Balanced Scorecard and

Performance Indicators, while the endogenous variables used are Internal Audit (as a mediator) and Organizational Performance Assessment.

In SEM-PLS, there are two models tested, namely the measurement model (outer model) and the structural model (inner model). In the measurement model, tests are conducted to evaluate convergent validity, discriminant validity, and reliability. In the structural model, tests are conducted to evaluate multicollinearity and hypotheses. The following are the results of data analysis from this study.

A. Evaluation of the Measurement Model (Outer Model)

The measurement model evaluation aims to evaluate the relationship between latent variables (constructs) and their indicators. The following elements are evaluated:

Convergent Validity Test

Convergent validity testing is a method for evaluating the extent to which indicators designed to measure a single construct (latent variable) are highly correlated with one another. Convergent validity indicates that the indicators indeed measure the same concept or construct in question. According to (Hair, J. F., et al, 2021), the results of convergent validity testing are measured based on the following indicators:

- the factor loadings of the indicators on the latent variable are greater than 0.7. According to Chin (1998), acceptable factor loadings are greater than 0.6.
- Convergent validity testing also needs to consider the average variance extracted (AVE) value to measure the proportion explained by the indicator to the construct, with an acceptable value of≥ 0.5.
- Composite reliability (CR) is used to measure how well indicators (question items on a questionnaire) measure a variable/construct. An acceptable CR value is > 0.7.
- Additionally, Cronbach's Alpha is used to evaluate the consistency of indicators, assuming that all indicators are equally important in measuring the variable. The accepted Cronbach's Alpha value is > 0.7.

The results of the discriminant validity test based on the evaluated elements are presented below.

Table 1. Results of the Discriminant Validity Test

Variable	Indicator	*Outer Loading*	*Cronbach's Alpha*	*Composite Reliability*	AVE
Balanced Scorecard	BSC1	0.923	0.925	0.947	0.816
	BSC2	0.882			
	BSC3	0.899			
	BSC4	0.910			
Performance Indicator	IK1	0.893	0.951	0.961	0.802
	IK2	0.861			
	IK3	0.883			
	IK4	0.885			

Variable	Indicator	*Outer Loading*	*Cronbach's Alpha*	*Composite Reliability*	AVE
	IK5	0.917			
	IK6	0.934			
Internal Audit	AI1	0.897	0.881	0.919	0.742
	AI2	0.926			
	AI3	0.874			
	AI4	0.735			
Organizational Performance Assessment	KO1	0.825	0.925	0.944	0.771
	KO2	0.902			
	KO3	0.895			
	KO4	0.871			
	KO5	0.894			

(Source: Processed data, 2024)

Based on Table 1 above, it can be seen that for the Balance Scorecard variable, the outer loadings for each indicator are in the range of 0.882 to 0.923, thus meeting the criterion of > 0.7. Cronbach's Alpha is 0.925 and meets the criterion of >0.7. Composite Reliability is 0.947 and meets the criterion of >0.7, indicating that the measurement is reliable. The AVE value of 0.816 meets the criterion of >0.5, indicating that overall, the measurement items explain 81.6% of the total variance contained.

In the Performance Indicator variable, the Outer Loadings values for each indicator are in the range of 0.861 to 0.934, thus meeting the criterion of > 0.7. The Cronbach's Alpha value of 0.951 and the Composite Reliability value of 0.961 also meet the criterion of > 0.7, indicating that this variable is reliable. Additionally, the AVE value of 0.802 exceeds the threshold of >0.5, meaning that overall, the measurement items explain 80.2% of the total variance contained.

In the Internal Audit variable, the Outer Loadings values for each indicator ranged from 0.735 to 0.926, meeting the standard of > 0.7. In addition, Cronbach's Alpha value of 0.881 and Composite Reliability of 0.919 also indicate that this variable is reliable because it has exceeded the criterion of > 0.7. Meanwhile, the AVE value of 0.742, which exceeds the minimum threshold of >0.5, indicates that the measurement items as a whole can explain 78.5% of the total variance present.

In the Organizational Performance Assessment variable, the Outer Loadings values for each indicator ranged from 0.825 to 0.902, indicating that these values met the standard of > 0.7. Furthermore, the Cronbach's Alpha value of 0.925 and the Composite Reliability of 0.944 confirm that this variable has a high level of reliability as it exceeds the minimum criterion of >0.7. Additionally, the AVE value of 0.771, exceeding the threshold of >0.5, indicates that the measurement items can explain 77.1% of the total variance contained.

Discriminant Validity Test

This test is a procedure in statistical analysis that aims to ensure that a construct in a measurement model is truly different from other constructs. In other words, this test shows

that the indicators of a latent variable (construct) do not overlap with the indicators of other latent variables, so that the constructs in the model are unique. According to Hair et al. (2021), the results of convergent validity tests are measured based on the following indicators:

- Fornell Larcker is used to evaluate discriminant validity by comparing the square root of the AVE of a construct with the correlation between constructs. The criterion used is that the AVE of the variable must be greater than the correlation between variables.
- Cross loading is used to test discriminant validity by comparing indicator loadings on the construct itself with those on other constructs.

The following is a presentation of the results of the discriminant validity test using the above elements.

Table 2. Results of Discriminant Validity Testing with Fornell Larcker

	Internal Audit	Balanced Scorecard	Performance Indicators	Organizational Performance Evaluation
Internal Audit	0.861			
Balanced Scorecard	0.754	0.903		
Performance Indicators	0.793	0.742	0.896	
Organizational Performance Assessment	0.848	0.821	0.836	0.878

(Source: Processed data, 2024)

Based on Table 2 above, it can be seen that the Internal Audit variable has an AVE root value of 0.861, which is greater than its correlation with the Balanced Scorecard, which has a value of 0.754, the Performance Indicators, which have a value of 0.793, and the Organizational Performance Assessment, which has a value of 0.848. The Balanced Scorecard variable has an AVE root value of 0.903, which is more strongly correlated with Performance Indicators (0.742) and Organizational Performance Assessment (0.821). The Performance Indicators variable has an AVE root value of 0.896, which is more strongly correlated with Organizational Performance Assessment (0.836). These results indicate that the discriminant validity of the variables has been established.

Table 3. Discriminant Validity Test with Cross Loading

	Internal Audit	*Balanced Scorecard*	Performance Indicators	Organizational Performance Evaluation
AI1	0.897	0.647	0.625	0.704
AI2	0.926	0.711	0.695	0.789
AI3	0.874	0.671	0.698	0.777
AI4	0.735	0.555	0.714	0.638
BSC1	0.658	0.923	0.699	0.744
BSC2	0.684	0.882	0.722	0.802

	Internal Audit	*Balanced Scorecard*	Performance Indicators	Organizational Performance Evaluation
BSC3	0.658	0.899	0.588	0.649
BSC4	0.719	0.910	0.664	0.760
IK1	0.668	0.667	0.893	0.708
IK2	0.604	0.597	0.861	0.653
IK3	0.790	0.747	0.883	0.780
IK4	0.687	0.690	0.885	0.764
IK5	0.736	0.618	0.917	0.760
IK6	0.757	0.661	0.934	0.807
KO1	0.666	0.639	0.684	0.825
KO2	0.735	0.712	0.787	0.902
KO3	0.812	0.753	0.786	0.895
KO4	0.723	0.731	0.691	0.871
KO5	0.775	0.763	0.713	0.894

(Source: Processed data, 2024)

The results of the discriminant validity test using cross-loading values indicate that the loading factor values in each variable column (bolded) are the highest compared to the cross-loading values of other variables. Thus, the indicators of each variable of the Balanced Scorecard (BSC), Performance Indicators (PI), Internal Audit (IA), and Organizational Performance Assessment (OPA) have met the criteria for discriminant validity.

B. Structural Model Evaluation (Inner Model

Structural model evaluation in the context of Structural Equation Modeling (SEM) refers to the process of assessing whether the structural model constructed in the study is capable of explaining the relationships between latent variables (constructs). The structural model tests the causal relationships or influences between constructs, and structural model evaluation focuses on the validity and quality of these relationships. The following are the elements that are evaluated.

Multicollinearity Test

Multicollinearity testing is a procedure to check whether there is a high correlation between two or more independent variables in a regression model or structural analysis. High multicollinearity can cause problems in the model because it makes the interpretation of regression coefficients unstable or biased. When independent variables are highly correlated, it is difficult to determine the individual influence of each variable on the dependent variable. Multicollinearity is measured using the VIF (Variance Inflated Factor) value, with a value below

5 indicating no multicollinearity among variables. The following are the results of the multicollinearity test.

Table 4. Results of Multicollinearity Test

Variable	VIF
Internal Audit -> Organizational Performance Evaluation	3.2
Balanced Scorecard → Internal Audit	2.227
Balanced Scorecard -> Organizational Performance Evaluation	2,661
Performance Indicators -> Internal Audit	2,227
Performance Indicators -> Organizational Performance Evaluation	4,839

(Source: Processed data, 2024)

Based on Table 4 above, the Balanced Scorecard (BSC) and Performance Indicator (PI) variables show a Variance Inflation Factor (VIF) value of less than 5 for the Internal Auditor (IA) and Organizational Performance Evaluation (OPE) variables. Similarly, the Internal Auditor (AI) variable has a VIF value less than 5 for Organizational Performance Evaluation (KO). This indicates that there are no significant multicollinearity issues among the variables in the research model.

Development of the Research Model

In this study, the variables used were grouped into two categories: exogenous and endogenous variables. The exogenous variables used in this study were Balanced Scorecard and Performance Indicators, while the endogenous variables used were Internal Audit (as a mediator) and Organizational Performance Assessment. A model is considered good if the development of the theoretical hypothesis model is supported by empirical data. The results of the analysis using Partial Least Square (PLS) to determine the overall influence between variables can be seen in the following figure.

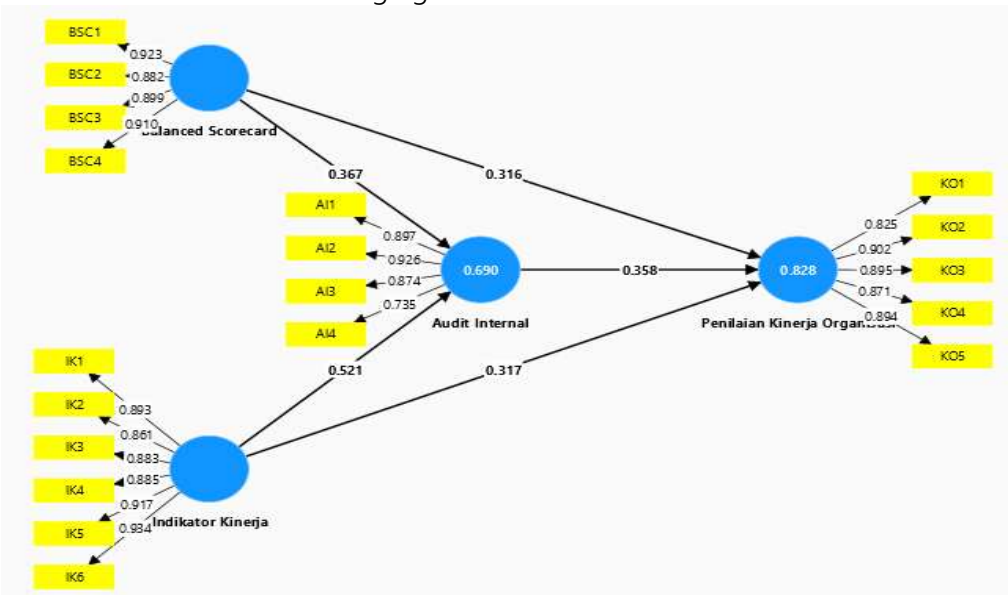

Figure 1. Research Model

Hypothesis Testing

In hypothesis testing, the test was conducted using t-statistic values and p-values as references to determine the significance of the relationship between variables. At a significance level of 5% (alpha = 0.05), the threshold value for the t-statistic is 1.645. The alternative hypothesis (Ha) is accepted and the null hypothesis (H0) is rejected if the t-statistic is greater than 1.96. Additionally, if using the p-value, the alternative hypothesis (Ha) is accepted if the p-value is less than 0.05. Based on the data used in this study, the hypothesis testing was conducted by considering the path coefficient values as well as the t-statistic or p-value to analyze the direct and indirect effects between variables.

Table 7. Results of Direct Effect Hypothesis Testing

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Description
Internal Audit -> Organizational Performance Assessment	0.358	0.359	0.073	4,907	0.000	Significant
Balanced Scorecard -> Internal Audit	0.367	0.361	0.119	3.08	0.001	Significant
Balanced Scorecard -> Organizational Performance Assessment	0.316	0.314	0.079	4.018	0.00	Significant
Performance Indicator -> Internal Audit	0.521	0.530	0.117	4.442	0.000	Significant
Performance Indicator -> Organizational Performance Assessment	0.317	0.318	0.065	4.869	0.000	Significant

(Source: Data processed, 2024)

Table 8. Results of the Hypothesis Test for Indirect Influence

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Description
Balanced Scorecard -> Internal Audit -> Organizational	0.131	0.130	0.052	2.531	0.006	Significant

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Description
Performance Evaluation						
Performance Indicator -> Internal Audit -> Assessment Organizational Performance	0.187	0.190	0.056	3.307	0.000	Significant

(Source: Processed data, 2024)

The following is an interpretation of the hypothesis testing results:
H1: The implementation of the Balanced Scorecard has a positive and significant effect on Internal Audit

Based on the results of the hypothesis testing analysis, it was found that the implementation of the Balanced Scorecard has a positive and significant effect on Internal Audit with a path coefficient of 0.367, a t-statistic of 3.084 (t > 1.645), and a p-value of 0.001 (P < 0.05). Therefore, hypothesis H1, which states that the implementation of the Balanced Scorecard has a positive and significant effect on Internal Audit, is accepted.

H2: Performance Indicators have a positive and significant effect on Internal Audit

Furthermore, the analysis results also indicate that Performance Indicators have a positive and significant effect on Internal Audit, with a path coefficient of 0.521, a t-statistic of 4.442 (t > 1.645), and a p-value of 0.000 (P < 0.05). Therefore, hypothesis H2, which states that Performance Indicators have a positive and significant effect on Internal Audit, is also accepted.
H3: Internal Audit has a positive and significant effect on Organizational Performance Evaluation

For the influence of Internal Audit on Organizational Performance Evaluation, a path coefficient of 0.358, a t-statistic of 4.907 (t > 1.645), and a p-value of 0.000 (P < 0.05) were obtained, indicating a positive and significant influence. This supports hypothesis H3, which states that Internal Audit has a positive and significant effect on Organizational Performance Evaluation.

H4: The implementation of the Balanced Scorecard has a positive and significant effect on Organizational Performance Evaluation

The direct effect of the Balanced Scorecard on Organizational Performance Evaluation was also found to be significant with a path coefficient of 0.316, a t-statistic of 4.018 (t > 1.645), and a p-value of 0.000 (P < 0.05), thus accepting hypothesis H4.

H5: Performance indicators have a positive and significant effect on organizational performance evaluation

Similarly, Performance Indicators have a positive and significant effect on Organizational Performance Evaluation, with a path coefficient of 0.317, a t-statistic of 4.869 (t > 1.645), and a p-value of 0.000 (P < 0.05), supporting the acceptance of hypothesis H5.

H6: The implementation of the Balanced Scorecard has a positive and significant effect on Organizational Performance Evaluation mediated by Internal Audit

In addition to direct effects, there are also significant indirect effects. The implementation of the Balanced Scorecard has a positive effect on Organizational Performance Evaluation through Internal Audit with a path coefficient of 0.131, a t-statistic of 2.531 (t > 1.645), and a p-value of 0.006 (P < 0.05), supporting hypothesis H6.

H7: Performance Indicators have a positive and significant influence on Organizational Performance Evaluation mediated by Internal Audit

Similarly, Performance Indicators have a positive influence on Organizational Performance Evaluation through Internal Audit with a path coefficient of 0.187, t-statistic 3.307 (t > 1.645), and p-value 0.000 (P < 0.05), indicating that hypothesis H7 is also accepted.

V. CONCLUSION

BSC is a strategic management tool that integrates financial and non-financial performance measurements through four perspectives: financial, customer, internal processes, and learning and growth. Previous research has definitively shown that BSC not only functions as a measurement tool but also as a framework for understanding the key drivers of organizational performance (Hegazy et al., 2022). BSC is a framework that focuses on financial aspects while also considering non-financial dimensions such as customer satisfaction, internal processes, and learning and growth. This is an effective approach for public organizations that often face challenges in measuring overall performance (Kumar et al., 2023).

The research methodology was based on a quantitative approach with path analysis using Structural Equation Modelling (SEM) based on Partial Least Squares (PLS). We collected data through questionnaires from employees and management at PT Bank Rakyat Indonesia. Convergent validity tests proved that all indicators were valid and reliable, making them reliable for further analysis. The results of this study clearly indicate that the implementation of BSC has a positive effect on organizational performance evaluation, with internal audit as a moderating variable that strengthens this relationship. These findings confirm that integrating BSC into the internal audit system is crucial for enhancing accountability and transparency, as well as enabling organizations to make more proactive and long-term sustainability-oriented decisions.

Overall, this study provides valuable insights into how BSC can be effectively implemented to improve organizational performance in the public sector, as well as highlighting the role of internal audit in ensuring that all performance dimensions are addressed in a balanced manner. These results are expected to serve as a reference for other organizations in implementing a more comprehensive performance measurement system.

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REFERENCES

Afonso, A., Tovar Jalles, J., & Venâncio, A. (2024). Fiscal decentralization and public sector efficiency: Do natural disasters matter? *Economic Modelling*,*137* (August 2023). https://doi.org/10.1016/j.econmod.2024.106763

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Hegazy, M., Hegazy, K., & Eldeeb, M. (2022). The Balanced Scorecard: Measures That Drive Performance Evaluation in Auditing Firms. *Journal of Accounting, Auditing and Finance*,*37* (4), 902–927. https://doi.org/10.1177/0148558X20962915

Irawan, A. (2021). The Influence of the Balanced Scorecard on Internal Audit and Organizational Performance Evaluation at PT Bank Rakyat Indonesia (Persero). *Jurnal Manajemen Dan Kewirausahaan*.

Kumar, A., Brar, V., Chaudhari, C., & Raibagkar, S. S. (2023). Performance Management Through the Balanced Scorecard Approach by the South African Revenue Service. *Public Organization Review*,*23* (3), 1143–1165. https://doi.org/10.1007/s11115-022-00646-5

Kusnanto, E. (2022). Performance Measurement Based on the Balanced Scorecard Perspective of Sustainable Leadership, Corporate Governance, and Human Capital in the Banking Industry. *International Journal of Contemporary Accounting*,*4* (1), 41–58. https://doi.org/10.25105/ijca.v4i1.13916

Melhem, A. A. (2014). The Influence of Risk Management on Sustainability. *Building Sustainable Legacies: The New Frontier Of Societal Value Co-Creation*,*2014* (4), 35–53. https://doi.org/10.9774/gleaf.8901.2014.de.00004

Oliveira, C., Rodrigues, M., Silva, R., Meirinhos, G., & Franco, M. (2022). BSC's Perspectives Ranking towards Organizational Performance: An Empirical Study Performed with Portuguese Exporters. *Sustainability (Switzerland)*,*14* (23). https://doi.org/10.3390/su142315979

OJK Audit Charter. (2019). *AUDIT CHARTER OF PT BANK RAKYAT INDONESIA (PERSERO), TBK*.

Ritonga, A. Y. (2023). The Role of Internal Audit in the Implementation of Corporate Risk Management. *Owner*,*7* (3), 2348–2357. https://doi.org/10.33395/owner.v7i3.1454

Sanchez-Marquez, R., Albarracin Guillem, J. M., Vicens-Salort, E., & Jabaloyes Vivas, J. (2018). A statistical system management method to tackle data uncertainty when using key performance indicators of the balanced scorecard. *Journal of Manufacturing Systems*,*48* (July), 166–179. https://doi.org/10.1016/j.jmsy.2018.07.010

Uma Sekaran and Roger Bougie. (2016). *Research Methods For Business* (7th ed.). John Wiley and Sons.

Zopounidis, C., & Lemonakis, C. (2024). The company of the future: Integrating sustainability, growth, and profitability in contemporary business models. *Development and Sustainability in Economics and Finance*,*1* (June), 100003. https://doi.org/10.1016/j.dsef.2024.100003