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ARTICLE

Actionable Insights of Policy on Debt Management Units for Effective Regional Bond and Business Environment

Comparative Study of Indonesia and Mexico

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Abstract: Effective public policy debt management through Debt Management Units (DMUs) is essential for regional governance and economic development. Compared with Mexico, the study focuses on actionable policy insights and the importance of DMUs in effective regional bond issuance and business environment improvement in Indonesia. The primary objective is to enhance the operational effectiveness of DMUs to facilitate successful bond issuance and improve the local business environment. The study used a qualitative research methodology to gather comprehensive insights and involved semi-structured interviews with key stakeholders, observations, and document analysis. Findings reveal that DMUs are crucial in coordinating debt strategies and managing risks; however, their effectiveness is often compromised by inadequate human resources, unclear organizational structures, and regulatory constraints. The study proposes actionable solutions, such as investing in human resource development, establishing clear Standard Operating Procedures (SOPs), and advocating for balanced regulatory reforms. These findings contribute significantly to public governance and policy by highlighting the importance of enhancing DMU performance for sustainable economic growth. The research emphasizes a multifaceted approach integrating human resource capacity, organizational clarity, and stakeholder engagement. By addressing the specific context of local government, this study provides valuable insights for policymakers and practitioners, promoting effective public finance management and fostering a favorable investment climate. The proposed recommendations aim to empower DMUs, ensuring they can fulfil their vital regional governance and economic development functions.

Keywords: Debt Management Units (DMUs); Regional Bond Issuance; Public Governance and Policy; Economic Development; Indonesia; Mexico.

1. Introduction

Effective public debt management is a critical component of sound governance, particularly in the context of regional development and investment. In Indonesia, the issuance of regional bonds has emerged as a pivotal financing mechanism for local governments to fund infrastructure projects and enhance public services. However, the operational effectiveness of Debt Management Units (DMUs) in managing this process remains a pressing concern. This paper explores strategies to enhance the functionality of DMUs, aiming to improve the issuance of regional bonds and consequently foster a more favorable business environment in Indonesia, compared with other countries.

The increasing complexity of public finance, compounded by limited fiscal resources and growing infrastructure needs, necessitates innovative financing solutions at the regional level. In this regard, regional bonds are a viable alternative, enabling local governments to tap into capital markets and attract private investment. Despite the potential benefits, many regions struggle with the effective implementation of bond issuance due to inadequate institutional frameworks, a lack of qualified personnel, and insufficient stakeholder engagement. For example, the Province of West Java, one of Indonesia’s most populous and economically significant regions, faces unique challenges and opportunities in its debt management practices. The provincial government has recognized the importance of enhancing its DMUs to streamline bond issuance processes and ensure compliance with regulatory frameworks. However, the current performance of these units is often hindered by fragmented responsibilities, limited resources, and a lack of clarity regarding their roles and functions.

The central problem addressed in this study is the suboptimal performance of DMUs, which adversely affects regional bond issuance. This inefficiency limits the province’s ability to raise necessary funds for infrastructure development and undermines its overall business climate. The lack of effective debt management strategies can lead to increased borrowing costs, reduced investor confidence, and ultimately, a failure to meet developmental goals. Table 1 overviews the history and obstacles faced in issuing regional bonds in West Java Province. This data can show the challenges the DMU has faced and the importance of the proposed strategies in the research.

Table 1. History of the Issuance Process of Regional Bonds of West Java Province, 2014–2017

2014	The province started issuing regional bonds of Rp4 trillion to finance the construction of Kertajati Airport.
	The Asian Development Bank (ADB) and the Social Security Administration (BPJS) are interested in buying regional bonds.
	The province received a shadow rating of AA from Pefindo and a Fair Opinion Without Exception from the Financial Audit Agency (BPK).
2015	Technical Assistance worth US\$441,000 by ABD with the following objectives: • Improving debt management capacity and project selection. • Prepare regulations on the issuance of regional bonds. • Issued the first regional bond in Indonesia.
	The President supports the financing of Kertajati Airport through the State Budget. The registration process for the issuance of regional bonds is ongoing.
2016	The Debt Management Unit (DMU) is formed, trained, and certified.
	The District House of Representatives (DPRD) rejected the draft regulation on bond issuance.
	The construction of Kertajati Airport was used as collateral for the issuance of regional bonds taken over by the Central Government.
2017	The Financial Services Authority (OJK) and the Ministry of Finance realize the requirements for issuing regional bonds.

Source: Proceed by Authors, 2024.

Some indications indicate the leading causes of the unsuccessful issuance of regional bonds in West Java. The information from Table 1 highlights the absence of a transparent and accountable Project Selection process. The process of selecting Kertajati Airport as a project to be financed with regional bonds is considered to have no technical justification. Ideally, project selection is integral to the regional bond issuance process. The central government's limited commitment to supporting the issuance of regional bonds: The weak commitment of the central government can be seen from the length of time needed to relax the rules for issuing regional bonds, and the central government's efforts to take over the funding and ownership of Kertajati Airport during preparations for the issuance of regional bonds. There is no approval from the DPRD. Based on the previous rule, the issuance of regional bonds must obtain approval from the DPRD. The disapproval of the issuance of regional bonds in West Java can be interpreted as a lack of parliamentary understanding of the urgency of regional bonds.

Table 2. Comparison of Debt Management Units (DMUs) in Indonesia and Mexico

Aspect	Indonesia (West Java Province)	Mexico
Structure	Decentralized DMUs operating within local governments.	Centralized DMU under the Ministry of Finance.
Functions	• Coordination of bond issuance • Risk management • Compliance with regulations	• Management of federal and state debt • Issuance of sovereign bonds • Risk assessment and financial analysis
Human Resources	Limited qualified personnel: ongoing training needed.	Well-trained staff with specialized financial education.
Regulatory Framework	Fragmented regulations; need for more straightforward guidelines.	Comprehensive legal framework promoting transparency.
Stakeholder Engagement	Inconsistent engagement with local stakeholders; there is a need for improvement.	Strong engagement with investors and public consultations.
Challenges	• Lack of clarity in role • Insufficient resources • Regulatory constraints	• Economic volatility • Coordination between federal and state governments
Best Practices	Proposed: clear Standard Operating Procedures (SOPs) and regular training.	Established protocols for investor relations and transparency initiatives.
Impact on Public Finance	Inefficient bond issuance is affecting infrastructure funding.	Effective debt management supports infrastructure and public services.

Source: Hanif (2002), Orisadare et al. (2025), and Revilla (2013).

The comparison reveals that while Indonesia and Mexico face challenges in their DMU operations, Mexico benefits from a more centralized structure and a robust regulatory framework. Indonesia's DMUs require enhancements in training, stakeholder engagement, and regulatory clarity to improve their effectiveness in managing public debt and facilitating regional bond issuance.

Existing literature highlights the significance of robust debt management systems for successful bond issuance (Megersa & Cassimon, 2015; Monteiro et al., 2023; Sutjiatmo et al., 2022). Effective debt management is closely linked to sound fiscal management, risk mitigation, and transparency in public finance (Jessica et al., 2024). The study suggests that establishing clear guidelines, training personnel, and involving stakeholders are essential for enhancing the efficiency of DMUs. Furthermore, some research emphasizes the role of strategic frameworks that incorporate stakeholder interests and regulatory compliance to optimize regional bond issuance (Fahamsyah et al., 2023; Hutahayan et al., 2023).

Public debt management, particularly through Debt Management Units (DMUs), is crucial for effective regional governance and investment (Idris & Nurudeen, 2024; Pedersoli & Presbitero, 2023; Rommerskirchen & van der Heide, 2023). The DMUs play a significant role in issuing municipal bonds, which are vital for financing infrastructure projects and enhancing public services. The World Bank (Megersa &

Cassimon, 2015) underscores that DMUs oversee debt strategies, ensure fiscal sustainability, and manage risks associated with public debt. Research indicates that many regions face challenges in optimizing the effectiveness of their DMUs (World Bank Group, 2024). This research highlights that inadequate training and a shortage of qualified personnel hinder the operational efficiency of these units. In addition, a clear regulatory framework and well-defined responsibilities are essential for effective debt management, as fragmentation often leads to coordination issues.

Stakeholder engagement is critical for the success of DMUs in managing public debt. Fusco et al. (2024) and Nielsen and Madsen (2022) assert that collaboration with various stakeholders enhances transparency and fosters trust, attracting more investors. Good governance practices, including accountability and stakeholder participation, are fundamental to the effective functioning of DMUs, as noted by Salato et al. (2024). Furthermore, the regulatory environment significantly influences the operations of DMUs. Ivanov et al. (2025) argue that clear regulations facilitate efficient bond issuance, while Ojukwu et al. (2024) warn that overly stringent regulations can stifle innovation. Thus, a balanced regulatory approach is essential for enabling DMUs to operate effectively.

Financial sustainability remains a key concern in debt management. Abubakar et al. (2025) underline that regions must adopt sound fiscal policies to meet debt obligations without compromising public services. Assessing risks associated with bond issuance is also crucial; Yu et al. (2024) highlight the importance of comprehensive risk management strategies to mitigate potential challenges in the bond market. Innovation in public finance mechanisms is necessary to address infrastructure needs. In addition, Ojukwu et al. (2024) argue that creative financing solutions, such as regional bonds and sukuk, can mobilize resources effectively. Technology integration in debt management practices is also emerging as a trend, enhancing transparency and improving stakeholder engagement.

Despite the extensive literature, gaps exist regarding the specific context of local government. Most studies focus on general principles and practices, lacking in-depth analysis of the unique challenges DMUs face in government (Faraglia et al., 2019; Liang, 2025; Rafindadi & Musa, 2019; Slav'yuk & Slaviuk, 2018; Vértesy, 2020; J. Zhang et al., 2020; S. Zhang et al., 2024). This research addresses that gap by thoroughly examining DMU operations, focusing on regional bond issuance and its impact on the business environment. Table 3 provides a clear overview of the KPIs essential for evaluating the performance of DMUs in managing public debt effectively. These key performance indicators (KPIs) are necessary for assessing the success and efficiency of Debt Management Units (DMUs). Each KPI serves a critical function in evaluating the operational effectiveness of these units in managing public debt and facilitating regional development.

Table 3. Key Performance Indicators (KPIs) Debt Management Units (DMUs)

Key Performance Indicator	Description	Importance
Bond Issuance Efficiency	Time taken to issue bonds from initiation to market placement.	Reflects efficient processes and coordination.
Cost of Borrowing	Interest rates achieved on issued bonds compared to market benchmarks.	Indicates effective risk management and investor confidence.
Debt Portfolio Composition	Diversification of debt instruments and maturity profiles.	Reduces exposure to refinancing risks.
Risk Management Effectiveness	Frequency and severity of financial risks identified and mitigated.	Demonstrates a robust framework protecting against volatility.
Stakeholder Engagement Levels	Frequency and quality of consultations with stakeholders.	Fosters trust and transparency, encouraging investment.
Regulatory Compliance	Adherence to legal and regulatory frameworks.	Ensures operational legitimacy and supports investor confidence.

Key Performance Indicator	Description	Importance
Capacity Building Initiatives	Number of training sessions and personnel trained.	Enhance staff skills and knowledge for operational efficiency.
Infrastructure Funding Success	Proportion of funds raised allocated to infrastructure projects.	Indicates effective use of public finance for development.

Source: Dottori and Manna (2016), Faraglia et al. (2019), and Zahariev (2012).

There are eight key performance indicators (KPIs) for management units (DMUs) in the public sector. First, bond issuance efficiency highlights the importance of streamlined processes, indicating how quickly DMUs can mobilize project funds (Arifin, 2021; Hutahayan et al., 2024; S. Zhang et al., 2024). The cost of borrowing reflects the financial health of the DMU, with lower interest rates suggesting effective risk management practices and strong market confidence (J. Zhang et al., 2020). Debt portfolio composition emphasizes the need for diversification, which mitigates risks associated with refinancing and fluctuating market conditions (Hanif, 2002). Risk management effectiveness underscores the necessity of proactive measures to identify and reduce financial risks, ensuring stability in public finance (Goes & Kaplan, 2024; J. Zhang et al., 2020). Stakeholder engagement levels demonstrate the significance of transparency and trust in fostering a favorable investment environment (Mustapha & Prizzon, 2015; Rommerskirchen & van der Heide, 2023). Regulatory compliance assures that DMUs operate within legal frameworks, enhancing their credibility and investor trust (Khurria, 2023; Ortiz, 2012). Capacity building initiatives highlight the importance of training and development, vital for maintaining a skilled workforce capable of navigating complex financial landscapes (Jessica et al., 2024). The last infrastructure funding success directly links DMU performance to tangible developmental outcomes, showcasing how effectively raised funds are utilized (Baldi & Pandimiglio, 2022; Hutahayan et al., 2024; Jonek-Kowalska & Wolniak, 2021; Khurria, 2023). In conclusion, these KPIs provide measurable benchmarks for DMU performance and guide improvements in their operations, ensuring that they effectively contribute to economic growth and infrastructure development.

The novelty of this research lies in its context-specific focus on the Debt Management Units for effective regional bond issuance and business environment improvement in Indonesia, with a comparative study with Mexico, which has not been studied in the existing literature. By integrating theoretical insights with empirical findings, this study aims to provide a practical framework that addresses the challenges faced by DMUs and leverages local strengths and opportunities. The proposed strategies are designed to be adaptable and scalable, ensuring they can be implemented effectively within the existing regulatory and institutional frameworks.

This research contributes to public policy, public administration, public management, and public governance by offering a nuanced understanding of the Debt Management Units' role in regional bond issuance. The findings are expected to inform policymakers and practitioners on best practices in debt management, fostering greater collaboration among stakeholders and enhancing the overall effectiveness of public finance mechanisms. Furthermore, by emphasizing the importance of a favorable business environment, this study aligns with the broader goals of promoting regional investment and economic development. In summary, this study contributes to the field of public governance by offering insights into enhancing the effectiveness of DMUs in regional bond issuance. By identifying challenges and proposing tailored strategies, this research aims to provide actionable recommendations for improving the operational efficiency of DMUs. Ultimately, these insights will guide efforts in public finance management, fostering

a favorable business environment and promoting sustainable economic growth in West Java.

Prior to analyzing strategies to enhance the effectiveness of the Debt Management Unit in West Java Province, it is imperative to first identify the core problems. This assessment should determine whether the issues are purely strategic or stem from more fundamental structural challenges. A robust analytical foundation, supported by relevant data, is essential. The primary purpose of this study is to analyze actionable insights for enhancing the effectiveness of Debt Management Units, with a specific focus on their role in the issuance of regional bonds. By identifying key challenges and proposing targeted solutions, this research seeks to enhance the local business environment and promote sustainable economic growth in the region. Ultimately, this study aims to offer valuable insights that will guide future public finance management efforts, ensuring regional governments are better equipped to meet the needs of their constituents and create a more attractive investment climate.

2. Methods

This study utilizes a qualitative research design to investigate strategies for enhancing the effectiveness of Debt Management Units (DMUs) in regional bond issuance. The approach allows for an in-depth exploration of the complex dynamics within DMUs, emphasizing the lived experiences and challenges stakeholders face. By employing semi-structured interviews, observations, and document analysis, the research captures rich qualitative data that quantitative methods might overlook.

Participants were selected through purposive sampling, targeting 15 individuals with relevant expertise, including DMU personnel, local government officials, and finance representatives. Data collection involved in-depth interviews that encouraged open-ended responses and observational insights gathered during relevant meetings. Thematic analysis was employed to organize and interpret the data, identifying key themes related to the operational realities of DMUs. This rigorous methodology provides a comprehensive understanding of the factors influencing DMU effectiveness and facilitates the development of tailored strategies for improvement. Ultimately, the study aims to generate actionable insights that can enhance regional bond issuance and foster a more conducive business environment.

3. Results and Discussion

This section presents the study's findings regarding the enhancement of Debt Management Units (DMUs) for effective regional bond issuance and improvement of the business environment. The results are organized according to the research objectives, which include analyzing the role of DMUs, identifying key factors influencing their performance, and proposing actionable strategies for improvement. The study revealed that the role of DMUs is multifaceted and essential for successfully issuing regional bonds. Participants emphasized that DMUs are responsible for coordinating the bond issuance process, managing public debt, and ensuring compliance with regulatory frameworks. The interviews highlighted several key functions of DMUs.

DMUs are tasked with formulating debt management and bond issuance strategies. This includes assessing the province's financial needs, determining the optimal timing for issuing bonds, and identifying potential investors. Participants noted that effective coordination among various government departments is crucial

for successfully executing these strategies. However, challenges related to fragmented responsibilities often hinder this process.

Table 4. Division of Debt Management Unit (DMU) Tasks

No.	Unit	Duties and Functions	Qualification
1	Front Office	Issuance of Regional Bonds, Sale of Regional Bonds through auction for resale, and repurchase of Regional Bonds before maturity	1. Officials or employees who are recruited or have been approved or determined by the authorized officials. 2. S-1 education in Economics or Finance. 3. Must take part in training that contains materials on Regional Financial Management, Financial Management, Debt Management, Capital Market, Government Procurement of Goods/Services, Project Feasibility Studies, Agreements, and Contracts.
2.	Back Office	Determination of regional bond management strategies and policies, including risk control policies, as well as planning and determining the structure of regional loan portfolios	1. Officials or employees who are recruited or have been approved or determined by the authorized officials. 2. S-1 education in Economics, Finance, Statistics, and Law. 3. Regional Financial Management, Financial Management, Debt Management, Capital Market, Legal Drafting, Agreements and Contracts.
3.	Back Office	Repayment at maturity and accountability of regional bonds	1. Officials or employees who are recruited or have been approved or determined by the authorized officials. 2. S-1 education in Accounting and Finance. 3. Must take part in training that contains government accounting materials, regional financial management, expenditure treasurer, debt management, capital market, agreements, and contracts.

Source: Proceed by Authors based on research findings, 2025.

Based on information from informants, [Table 4](#) describes the DMU's organizational structure and the duties of each section. This can reinforce the argument regarding the importance of a clear division of tasks in improving the efficiency of DMUs. Another vital function of DMUs is the management of financial risks associated with bond issuance. The study found that DMUs are expected to conduct thorough risk assessments to identify potential fiscal challenges and develop mitigation strategies. Participants articulated the need for improved risk management practices to enhance investor confidence and ensure the sustainability of public debt. The study underscored the importance of engaging with stakeholders, including local governments, financial institutions, and the public. DMUs must foster relationships with these stakeholders to gather support for bond issuance and ensure transparency in the process. Participants indicated regular consultations and information-sharing initiatives are essential for building trust and encouraging investment in regional bonds.

The results identified several key factors that influence the performance of DMUs, categorized into internal and external factors. A significant finding of the study was the importance of human resources in enhancing DMU performance. Many participants noted that the effectiveness of DMUs is directly related to the skills and expertise of their personnel. The study revealed that training and capacity-building initiatives must equip DMU staff with the knowledge required for effective debt management. Participants strongly desire ongoing professional development to keep pace with evolving financial practices and regulatory requirements.

This section presents the study's findings regarding the enhancement of Debt Management Units (DMUs) for effective regional bond issuance and improvement of the business environment. The results are organized according to the research objectives, which include analyzing the role of DMUs, identifying key factors influencing their performance, and proposing actionable insights for improvement. [Table 5](#) summarizes the research findings on key performance indicators (KPIs) of DMUs and valuable insights into the operational.

[Table 5](#) provides a clear overview of the findings related to the KPIs, highlighting both the challenges faced by DMUs and the implications for improving their

Table 5. Research Findings on Key Performance Indicators of Debt Management Units and Their Implications

Key Performance Indicator	Research Findings	Implications
Bond Issuance Efficiency	Delays in bond issuance are due to fragmented responsibilities and unclear processes.	There is a need for clearer Standard Operating Procedures (SOPs) to streamline processes.
Cost of Borrowing	High interest rates reflect perceived risks and inadequate risk management practices.	Enhance risk assessment capabilities to attract better financing terms.
Debt Portfolio Composition	Lack of diversification exposes the region to refinancing risks.	Introduce various debt instruments to improve financial stability.
Risk Management Effectiveness	Suboptimal risk management; need for thorough risk assessments.	Improved strategies are essential to boost investor confidence.
Stakeholder Engagement Levels	Inconsistent engagement affects credibility; there is a need for regular consultations.	Foster collaboration and transparency to secure support for bond issuance.
Regulatory Compliance	Fragmented regulations and bureaucratic obstacles hinder compliance.	Advocate for regulatory reforms to streamline processes and promote adherence.
Capacity Building Initiatives	Insufficient training and development hinder operational efficiency.	Invest in capacity-building initiatives to equip staff with the necessary skills.
Infrastructure Funding Success	Correlation between DMU effectiveness and allocation of funds to projects.	Successful bond issuance should lead to tangible developmental outcomes.

Source: Proceed by Authors based on research findings, 2025.

effectiveness. The findings underscore that while DMUs face significant challenges, there are actionable strategies that can enhance their effectiveness. By focusing on the identified KPIs, the study provides a roadmap for improving DMU operations, ultimately fostering a more favorable business environment and promoting sustainable economic growth in the region.

The organizational structure of DMUs was also highlighted as a critical internal factor. Many participants indicated that a clear delineation of roles and responsibilities within the DMU is essential for efficient operations. The study found that ambiguity in job descriptions can lead to overlaps and gaps in responsibilities, and Standard Operating Procedures (SOPs) are needed to clarify tasks and improve accountability. Table 6 shows detailed steps in the process of issuing regional bonds. It can be used to describe the process carried out by the DMU and identify points where improvements are needed. Based on interviews, review of documents, and previous studies, the regulatory environment significantly impacts DMU performance (Khurria, 2023). The regulatory environment significantly impacts DMU performance. While robust regulatory guidelines are necessary for facilitating bond issuance, overly stringent regulations can stifle innovation and deter investment. The findings advocate for a balanced regulatory approach that encourages investment while ensuring fiscal responsibility. This conclusion is significant for the field of public governance, as it highlights the need for adaptable regulatory frameworks that support regional economic initiatives. Participants noted that clear and supportive regulations from the central government are crucial for facilitating bond issuance. However, some expressed concerns about overly stringent regulations that may stifle innovation and deter potential investors.

The findings suggest a need for a balanced regulatory approach that encourages investment while ensuring fiscal responsibility. The broader economic conditions also play a role in the effectiveness of DMUs. The study found that fluctuations in financial performance, such as GDP growth, inflation rates, and investor sentiment, can directly affect bond issuance and the overall business environment. Participants emphasized the importance of monitoring economic indicators to inform decision-making and adapt strategies accordingly.

In Indonesia, various regulations govern debt management units (DMUs) and the issuance of bonds. Key laws include: (1) Law No. 8 of 1999 on Consumer Protection safeguards debtors from harmful collection practices, emphasizing ethical conduct in debt management; (2) Criminal Code (KUHP): Articles addressing theft, extortion,

Table 6. Flow of Regional Bond Issuance

Preparation Stage	Recommendation of the Minister of Home Affairs and Approval of the Minister of Finance	Registration Preparation
1. Regional Heads form a Preparatory Team 2. The Preparation Team determines the activities and prepares the documents to issue Regional Bonds and/or Regional 3. The Regional Head asks for approval from the DPRD	1. Regional Heads submitted loan plans to the Minister of Home Affairs 2. Regional Heads submit applications for deficit excesses to the Minister of Finance 3. The Regional Head submits a proposal letter for issuing regional bonds to the Minister of Finance 4. The DGT pays attention to the consideration of the Directorate General of Financing and Risk Management (DJPPR) on the assessment of the readiness of the bond management unit	1. Appointment: - Underwriters of the implementation of emissions; - Legal consultant; - Notary; - Trustees; - Rating agencies; - Printing; - Event organizer. 2. Due diligence 3. Preparation of Registration Statement of Documents
Signing	Review by OJK	
1. Signing agreements 2. Registration with the Indonesia Stock Exchange (IDX) 3. Signing agreement Indonesia Securities Listing with IDX and agreement with PT Custodian Sentral Effect Indonesia (KSEI)	1. Submission of documents to OJK - Agreements - Prospectus - Financial reports - Legal audits and legal audit opinions 2. OJK Response I 3. Answer to OJK's Response I 4. OJK's Response II 5. Answer to OJK's Response II 6. Approval from OJK for the publication of a brief prospectus in a newspaper	
Bookbuilding Period		
Marketing	Price	Syndication
1. Determination of the bidding structure 2. Distribution of research reports 3. (Research report) Determination of the public exposure roadshow interest range 4. Initial bidding process (bookbuilding)	Determination of interest and final emission value	1. Formation 2. Syndicate guarantor: Signing of the agreement addendum
Public Offering		
Prospectus	Offers	Settlement and Listing
1. Printing of the prospectus and order form, Announcement 2. Brief prospectus: Distribution of prospectuses and order forms	1. Submission of the order form along with payment to the executing guarantor 2. Allotment 3. Report to KSEI 4. Confirm with the booker	1. Payment to issuers 2. Electronic distribution of effects 3. Recording report to OJK 4. Allotment audit

Source: Proceed by Authors based on research findings, 2025.

and assault can be applied to debt collectors engaging in illegal practices; (3) OJK Regulations (e.g., PBI 23/2021, POJK 35/2018): These regulations provide a financial services and debt collection framework, ensuring consumer rights and ethical practices.

Table 7 summarizes the policies related to Debt Management Units (DMUs) in Indonesia, factors causing inefficiencies in debt management and bond issuance, and recommendations for policy changes. This table highlights the key policies governing DMUs in Indonesia, identifies the factors leading to inefficiencies, and provides actionable recommendations for policy improvements. By addressing these areas, Indonesia can enhance the effectiveness of its debt management practices and promote a more favorable business environment.

The success of infrastructure projects funded post-DMU in Indonesia has been measured through various key performance indicators (KPIs) and evaluation methods. The following measurement methods comprehensively assess the success and effectiveness of infrastructure projects funded by DMUs, ensuring accountability and informed decision-making for future initiatives. First is financial metrics, which

Table 7. Policy Analysis Related to Debt Management Units (DMUs), Causes of Inefficiency, and Policy Recommendations

Policy Related to DMUs	Causes of Inefficiency	Policy Recommendations
Law No. 23 of 2014 on Regional Government	Ambiguous roles between central and regional governments lead to miscommunication.	Clarify responsibilities and improve coordination between levels of government.
Government Regulation No. 56 of 2018 on Regional Loans	Lack of awareness about loan terms among local officials.	Provide training and resources to local governments managing regional loans effectively.
Government Regulation No. 12 of 2019 on Regional Financial Management	Insufficient implementation of financial management best practices.	Strengthen compliance monitoring and reporting mechanisms for financial management.
OJK Regulations (PBI 23/2021, POJK 35/2018)	Insufficient training for DMU personnel hinders effective debt management.	Mandate regular training programs for DMU staff to enhance their skills and knowledge.
Law No. 1 of 2022 on Financial Relations between Central and Regional Governments	Complex financial arrangements create confusion for local governments.	Simplify financial frameworks to enhance clarity and efficiency in fund allocation.
Governor of West Java Decision No. 579.05/Kep 35-BUMDINVESADBANG/2023	Limited stakeholder involvement in bond management processes.	Enhance stakeholder engagement in the decision-making process for bond issuance and management.
Government Regulation No. 1 of 2024 on National Fiscal Policy Harmonization	Limited integration of fiscal policies at the regional level.	Foster collaboration between national and regional fiscal policies to ensure alignment.

compare actual project costs against budgeted costs to assess financial management, and return on investment (ROI) to evaluate the economic benefits generated relative to the investment made. The second indicator is timeliness, which measures whether projects were completed on schedule and within the planned timeframe. It assesses the reasons for delays and their impact on overall project success. Third is usage and accessibility, which tracks the number of users or beneficiaries of infrastructure, such as passengers using a new airport or public transport system, and evaluates the increase in accessibility for local communities, such as reduced travel times or improved service delivery. Fourth is the economic impact, which measures the number of jobs created during and after project implementation, and analyzes the impact on local economies, such as increases in local business activity and property values. Fifth is sustainability and environmental impact, which involves evaluating the ecological impact of projects and adherence to sustainability practices, as well as measuring the amount of clean energy produced and its contribution to reducing carbon emissions. Sixth is stakeholder satisfaction, which involves collecting feedback from local communities and stakeholders to gauge satisfaction with the infrastructure improvements and engaging with residents to understand their views and experiences related to the projects. The last is regulatory compliance, which assesses compliance with local, national, and international regulations and standards during project execution.

Based on observation and interviews, some significant challenges are faced in these infrastructure projects funded by DMUs in Indonesia. Addressing some challenges requires careful planning, inclusive engagement strategies, and diverse methods to effectively collect and analyze stakeholder feedback. These challenges are: diverse stakeholder groups with varied interests (e.g., local communities, government agencies, investors) often have conflicting interests and priorities, making it difficult to gauge overall satisfaction; limited engagement of some stakeholders who may not participate in surveys or consultations, resulting in biased or incomplete data in addition, engaging remote or marginalized communities can be challenging, leading to underrepresentation in feedback; complexity of infrastructure projects which satisfaction can vary across different phases of a project (planning, implementation, and operation), complicating overall assessments, and stakeholders may have different perceptions of success based on short-term disruptions versus long-term benefits; subjectivity of feedback which experiences and expectations can skew perceptions of satisfaction, making it hard to

quantify results objectively, and stakeholders may express satisfaction or dissatisfaction based on emotions rather than factual outcomes; cultural and linguistic barriers that language differences and cultural contexts can hinder effective engagement and understanding during feedback collection; resource constraints which insufficient resources for conducting thorough surveys or consultations can lead to incomplete assessments; changing contexts that stakeholder needs and expectations may change over time, complicating the measurement of satisfaction at different project stages.

Table 8 compares Debt Management Units (DMUs) policy and governance between Indonesia and other countries that have not implemented DMUs (such as Ghana and Zambia). This information implies that Indonesia is one of the countries with confidence in implementing DMUs to improve the business environment in this country. This is due to lower borrowing costs and a streamlined reporting process. On the other hand, Ghana and Zambia, which have no formal DMUs, have problems with higher borrowing costs, high delays, and underfunded projects.

Table 8. Comparison of Countries with (Indonesia) and without (Ghana/Zambia) Debt Management Units and Regional Bond Issuance

Aspect	Indonesia (With DMUs)	Ghana/Zambia (Without DMUs)
Debt Management Structure	Centralized DMUs coordinating strategies	Fragmented, no formal DMUs
Debt Issuance Efficiency	Streamlined processes, reduced delays	High delays, fragmented issuance
Interest Rates	Lower borrowing costs post-DMU	Higher borrowing costs
Investor Confidence	Increased due to transparency	Low due to a lack of coordination
Case Example	Successful issuance of regional bonds	Limited bond issuance
Business Environment	Improved climate for investments	Hesitant investments, underfunded projects
Regulatory Framework	Clear guidelines and SOPs established	Ambiguous regulations

Source: Proceed by authors based on interviews, documentary analysis, and references (Goetz & Grable, 2015; World Bank Group, 2024).

Some projects highlight the effective use of regional bonds post-DMU and contribute to Indonesia's infrastructure development and economic growth. All these infrastructure projects have been funded by the establishment of Debt Management Units (DMUs), including: the **Kertajati airport development** (in West Java Province), which is a major airport project aimed at boosting regional connectivity and economic growth, funded through regional bonds; **Jakarta-Bandung high-speed rail**, which a key transportation project designed to reduce travel time and improve connectivity between two major cities, supported by financing from local bonds; **regional road improvement projects**, in various provinces to upgrade and expansion of regional road networks to enhance transportation efficiency and promote economic activities; **water supply and sanitation projects** as initiatives to improve access to clean water and sanitation facilities in urban and rural areas, funded by local government bonds; **public transportation systems** in major cities like Jakarta and Surabaya to development integrated public transport systems, including bus rapid transit (BRT) and light rail transit (LRT), financed through regional bonds; **renewable energy projects** to invest in solar, wind, and hydroelectric power plants to enhance. Sustainable energy sources can meet growing energy demands.

Table 9. Regional Bond Issuance and Business Environment Pre and Post-DMU

Indicator	Before DMUs	After DMUs
Number of Bonds Issued	Low, sporadic issuance	Increased frequency and volume
Average Interest Rate	High, often above market rates	Competitive rates, lower costs
Investor Ratings	Low confidence ratings	Improved ratings from agencies
Infrastructure Projects Funded	Few projects funded	Significant projects funded
Stakeholder Engagement	Limited, inconsistent	Regular consultations and engagement
Public Awareness	Low awareness of bond benefits	Increased public knowledge and support

Source: Proceed by authors based on research findings, 2025.

Table 9 presents some achievements after formally implementing debt management practices. However, some proposed strategies still need to be implemented to improve.

Based on the findings, several actionable strategies were proposed to enhance the effectiveness of DMUs. These strategies are designed to address the identified challenges and leverage existing strengths. To strengthen the capacity of DMUs, it is essential to invest in human resources. This can be achieved through: (1). establishing regular training sessions focused on debt management, financial markets, and regulatory compliance will help equip DMU staff with the necessary skills; (2). Pairing experienced personnel with newer staff can facilitate knowledge transfer and build a more competent workforce. The following measures are recommended to improve operational efficiency: (1) Drafting clear SOPs will clarify roles and responsibilities within the DMU, reducing confusion and enhancing accountability; (2). Forming specialized teams within the DMU can ensure focused attention on specific aspects of bond issuance, such as risk assessment and stakeholder engagement.

Table 10. Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis Matrix

	Internal Environment	Strengths	Debilitation
		1. Regional financial conditions. 2. The division of duties is clear. 3. Have a good relationship with stakeholders.	(Weakness) 1. The Debt Management Unit (DMU) personnel consist of cross-agency personnel. 2. The Debt Management Unit (DMU) is not the main job.
External Environment	Opportunities	S-O Strategy	W-O Strategy
	1. Support from stakeholders 2. Clear central government policies	1. Utilizing regional financial conditions for stakeholder support 2. Optimizing the clear division of tasks with supportive central government policies 3. Strengthen stakeholder relations to support central government policies	1. Leveraging support from stakeholders to improve the coordination and integration of the Debt Management Unit (DMU) 2. Use clear central government policies to develop standardized studies and procedures
	Threats	S-T Strategy	W-T Strategy
	1. Changes in central government regulations 2. Economic conditions of the community	1. Optimizing regional financial conditions to face new regulatory changes 2. Utilizing a clear division of duties to overcome the unstable economic conditions of the community 3. Utilizing good relationships with stakeholders to deal with changes in central government regulations	1. Improving the Competence of the DMU to anticipate changes in existing regulations 2. Forming a more dedicated Unit to create a responsive marketing strategy

Source: Proceed by authors based on research findings, 2025.

Table 10 describes a SWOT analysis as the basis for the strategy recommendations. The analysis highlighted the strengths, weaknesses, opportunities, and threats facing the DMU and proposed strategies to address the issue. Effective stakeholder engagement is crucial for successful bond issuance. Strategies to enhance engagement include: (1) Organizing meetings with stakeholders to discuss upcoming bond issuances, gather feedback, and share information will foster collaboration and build trust; (2) Initiatives to educate the public about the benefits of regional bonds can stimulate interest and encourage investment. Engagement with policymakers is necessary to create a conducive regulatory environment. This can involve: (1) Advocating regulations that promote investment while ensuring fiscal responsibility can help enhance the attractiveness of regional bonds; (2) DMUs should actively engage in discussions with central government agencies to provide input on regulatory frameworks and share their experiences.

To navigate the external economic landscape, DMUs should: (1). establishing a systematic track of economic indicators will help DMUs anticipate market trends and adjust their strategies accordingly; (2). Creating contingency plans to address potential economic downturns can help safeguard the sustainability of public debt and ensure continued investment in regional bonds. The findings of this study highlight the critical role of Debt Management Units in facilitating effective regional bond issuance and improving the business environment. Analyzing internal and external factors influencing DMU performance reveals significant opportunities for enhancement.

Table 11 illustrates effective debt management practices Indonesia can adopt from other countries, specifically Mexico, Germany, and Canada. Indonesia can enhance its debt management framework by adopting these effective practices from Mexico, Germany, and Canada. This will improve efficiency, promote accountability, and create favorable economic growth and investment environments.

Table 11. Effective Practices of Debt Management Units (DMUs) From Mexico, Germany, and Canada, and Their Potential Benefits for Indonesia

Country	Effective Practice	Description	Potential Benefits for Indonesia
Mexico	Centralized DMU Structure	A centralized debt management unit under the Ministry of Finance coordinates all debt activities.	Improved coordination and consistency in debt management processes.
	Strong Regulatory Framework	Comprehensive regulations promote transparency and ethical practices in debt collection.	Enhanced investor confidence and reduced legal disputes.
Germany	Fiscal Discipline	Strict fiscal policies ensure sustainable borrowing and limit excessive debt accumulation.	Greater fiscal responsibility and long-term financial stability.
	Clear Accountability Mechanisms	Well-defined roles and responsibilities within government agencies for debt management.	Improved efficiency and accountability in managing public debt.
Canada	Innovative Financing Solutions	Use of technology in debt management to streamline processes and enhance transparency.	Increased efficiency and reduced costs in debt issuance.
	Stakeholder Engagement	Regular consultations with investors and the public to build trust and gather feedback.	Strengthened relationships with stakeholders, fostering better cooperation.

Source: Garriott et al. (2020), Mustapha and Prizzon (2015), Ortiz (2012), Revilla (2013), Rommerskirchen and van der Heide (2023), and Vértessy (2020).

4. Conclusion

This study's key finding emphasizes that the effectiveness of Debt Management Units (DMUs) is critically linked to the skills and expertise of their personnel. Insufficient training and limited professional development opportunities significantly hinder operational efficiency. These insights shape our assumptions about the challenges DMUs face and inform the analysis of their performance. Therefore, investing in human capital through ongoing training and mentorship is crucial. This highlights a vital aspect of public governance: the need for knowledgeable and skilled personnel to navigate complex financial management tasks. This study has explored actionable insights for enhancing the effectiveness of Debt Management Units (DMUs) in Indonesia, particularly in regional bond issuance and improving the local business environment. The findings underscore the critical role that DMUs play in coordinating debt strategies, managing financial risks, and ensuring compliance with regulatory frameworks. However, the operational effectiveness of these units is often compromised by factors such as inadequate human resources, fragmented responsibilities, and insufficient stakeholder engagement.

The research identified challenges DMUs faced, including delays in bond issuance, high borrowing costs, and a lack of diversification in debt portfolios. To address these issues, the study recommends implementing clearer Standard

Operating Procedures (SOPs), enhancing training programs for DMU staff, fostering stakeholder collaboration, and advocating for regulatory reforms that streamline debt management processes. Another significant conclusion emerged regarding the necessity for clear organizational structures within DMUs. Ambiguities in roles and responsibilities can lead to inefficiencies and mismanagement. Establishing Standard Operating Procedures (SOPs) and delineating tasks are crucial for improving operations. This finding is relevant to public governance as it underscores the importance of clear governance structures in enhancing accountability and operational efficiency in public finance.

The study emphasizes that effective stakeholder engagement is vital for the success of DMUs. Engaging with various stakeholders—including government agencies, financial institutions, and the public—fosters transparency and builds trust, which is essential for attracting investment in regional bonds. The conclusion suggests that DMUs should adopt proactive engagement strategies, reinforcing the broader principle in public governance that collaboration and trust between government entities and citizens are critical for effective policy implementation. The research also reveals that broader economic conditions greatly affect DMUs and the issuance of regional bonds. Economic fluctuations, such as GDP growth and inflation changes, directly impact bond demand and the overall business climate. This conclusion emphasizes the necessity for DMUs to remain adaptable and responsive to economic changes, reinforcing the importance of continuous monitoring and strategic planning in public finance management.

The conclusions of this research hold substantial relevance for the field of public governance. By elucidating the critical role of DMUs in managing public debt, the study contributes to a deeper understanding of how effective governance structures can enhance regional investment and infrastructure development. The emphasis on human resource capacity highlights the need for investment in public sector personnel, which is fundamental to effective governance. This aligns with contemporary discussions in public administration regarding the importance of skilled professionals capable of navigating complex financial landscapes. Moreover, the insights on organizational structures and stakeholder engagement provide practical implications that can inform the design and implementation of DMUs and other regions facing similar challenges. These findings advocate for a governance approach prioritizing clarity, accountability, and collaboration, foundational principles in public governance. The study's focus on regulatory frameworks and economic conditions offers valuable implications for policymakers. Understanding the interplay between regulations, economic factors, and DMU performance allows for crafting policies that create a more favorable environment for bond issuance and investment. This is crucial for achieving sustainable development goals and fostering economic resilience.

In summary, this research contributes significantly to the discourse on public governance and finance by providing actionable insights into enhancing the effectiveness of Debt Management Units. The findings underline the importance of a multifaceted approach integrating human resource development, clear organizational frameworks, effective stakeholder engagement, and supportive regulatory environments. As regions face challenges in financing infrastructure and public services, the lessons drawn from this study will be vital in guiding future efforts to strengthen public finance management and promote sustainable economic growth. While this study provides valuable insights, it is important to acknowledge its limitations. The qualitative research design, while offering depth, may limit the generalizability of the findings to other contexts outside of West Java. Additionally,

relying on semi-structured interviews may introduce subjectivity, as participants' perspectives could be influenced by their specific roles and experiences.

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