

CHAPTER 1 – INTRODUCTION

1.1. Background

Industrial revolutions have brought significant improvement in all aspects and improved human lifestyles. These revolutions have impacted multiple lines of business, including manufacturing, transportation, electricity, and many more technologies. The rapid pace of revolutions has changed the way we live, work, and interact which in turn improves the quality of life (Har et al., 2022).

The development of technology within Information and Communication Technology (ICT) field such as the advancement of electronics, computers, and communication technology (Har et al., 2022), has shifted people's behavior and lifestyle (Widjaja et al., 2024). One of the shifts in behavior is the transformation of business activities including digital transformation in banking industry (Ma & Gu, 2024; Osei et al., 2023).

According to survey that has been conducted by APJII (Asosiasi Penyelenggara Jasa Internet Indonesia), in Indonesia, there are growing numbers of digital internet user by the year as depicted by Figure 1.1. There are 215,63 million of internet users in Indonesia. This number equals to 78% of Indonesia total population of 275 million (Nurhanisah, 2023).

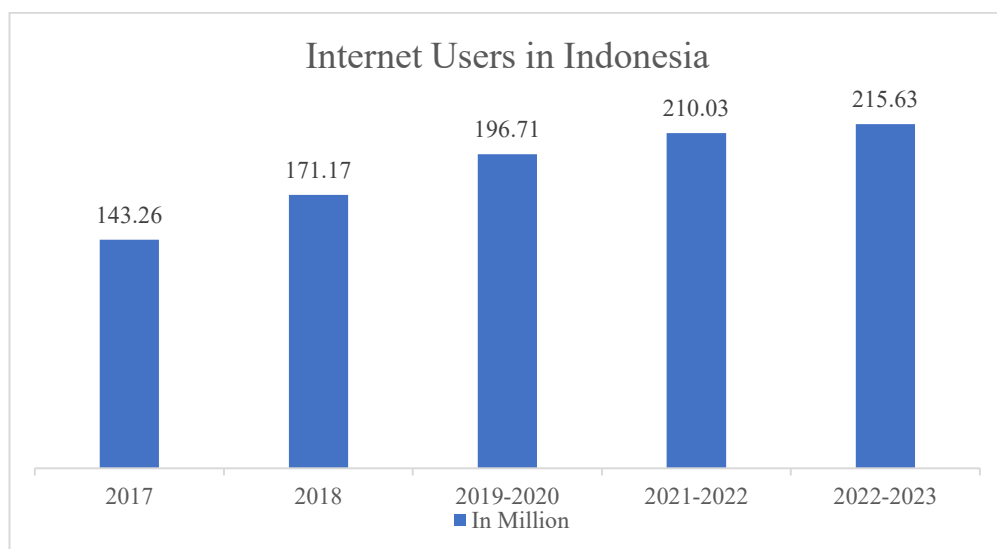


Figure 1.1. Internet Users in Indonesia (Nurhanisah, 2023)

The growing numbers of internet users in Indonesia provides new demands that needs to be fulfilled such as need of online shopping, entertainment, digital transactions, and digital financial services. This is happening because digital-based services and products provide flexibility and time efficiency for customers which enhance their productivity (Sardjono et al., 2024). The public's need for digital financial services is driving the banking industry to undertake digital transformation.

Digital transformation in banking industry has enabled banks to offer services from conventional services into digital services through mobile and online banking (Bankuoru Egala et al., 2021). This service offers wide range of advantages for customers such as service availability, accessibility, practicality, efficiency, and ease of use (Alfarizi & Sari, 2022).

The benefits provided by digital banking services are proportional to the increased public's use of digital banking services. According to data adapted from Central Bank of Indonesia (Bank Indonesia), the number of digital banking transaction in September 2024 reached 1.92 billion. Meanwhile, in 2023, the number of digital banking transactions was recorded at 1.37 billion. This shows an increase of 40.45% year on year (Antara News, 2024). The rise in transaction volume is illustrated in Figure 1.2.

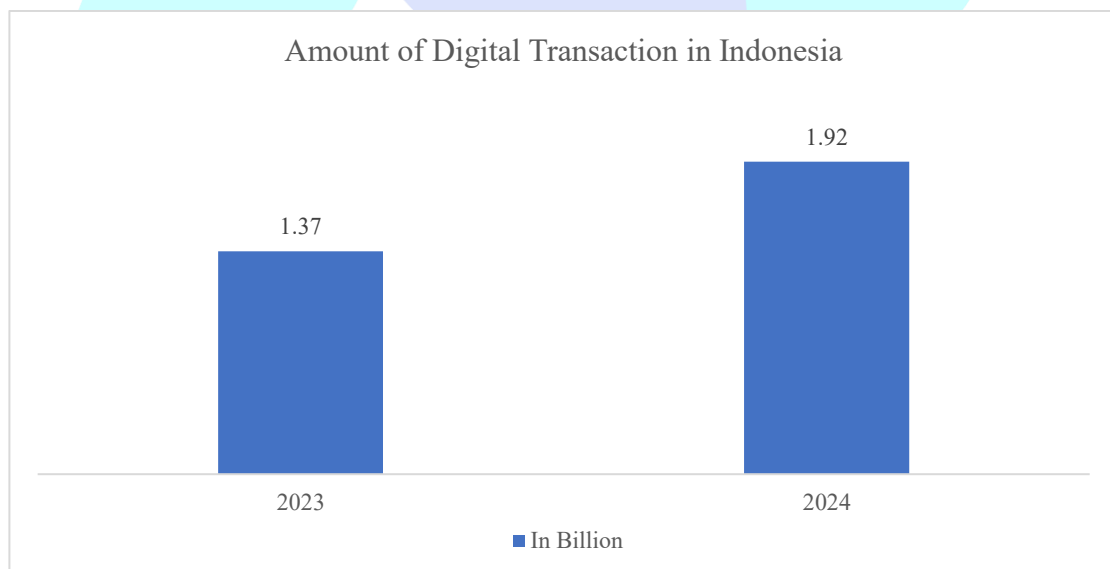


Figure 1.2. Amount of Digital Transaction in Indonesia (Antara News, 2024)

In line with the increase in the number of transactions, the value of digital banking transactions has also shown positive growth, as illustrated in Figure 1.3. In 2023, the

value of digital banking transactions was recorded at Rp 4.837 trillion. Meanwhile, as of September 2024, the value reached Rp 7.492 trillion. On a year-on-year basis, the value of digital banking transactions grew by 54.89%.

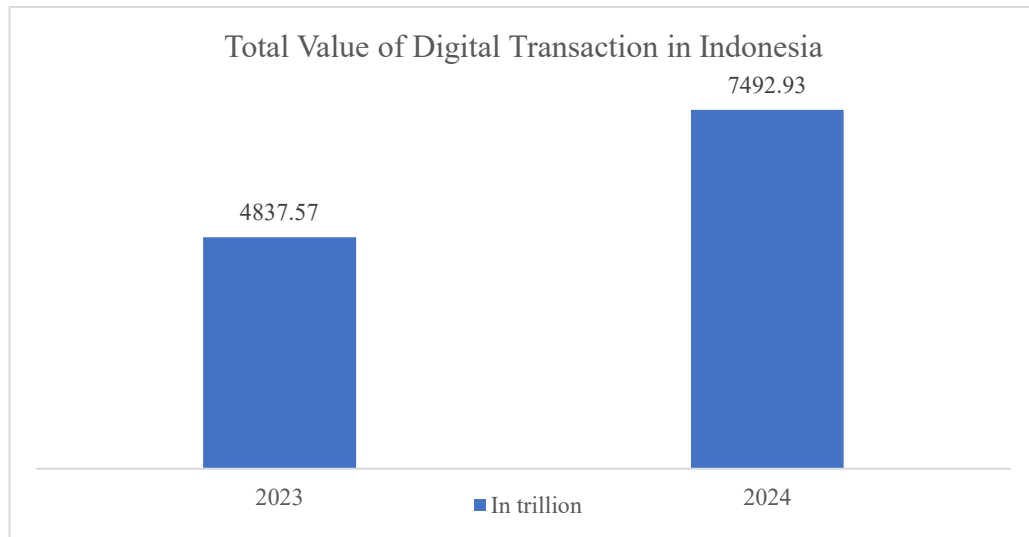


Figure 1.3. Total Value of Digital Transaction in Indonesia (Antara News, 2024)

According to (Viva.co.id, 2024), there are at least 15 digital banking services in Indonesia as per 2024. There are Jenius by Bank BTPN, Neo+ by Bank Neo Commerce, Blu by BCA Digital, Line Bank by KEB Hana Bank with cooperation with Line Corporation, SeaBank by Sea Limited, Jago by Bank Jago, Allobank, and several other banks.

However, the potential development of digital banking does not come without threats. According to Alzoubi et al. (2022), there are some security issues that can have serious or even fatal consequences for digital banking services such as unencrypted data, malware, supply-chain attack, manipulated data, and impersonation. These threats even further realized with recent incidents such as BSI ransomware in 2023 and CrowdStrike outage in 2024 which disturbs banking industry which both causes financial and operational losses along with reputational damage (Bloomberg Opinion, 2024; CNN Indonesia, 2023).

Addressing these challenges, Indonesia Financial Services Authority (Otoritas Jasa Keuangan – OJK) has established regulations governing the user of information technology in banking services through various provisions. These include Peraturan

OJK (POJK) No. 11/POJK.03/2022 concerning The Implementation of Information Technology by Commercial Banks, Surat Edaran OJK (SEOJK) No. 21/SEOJK.03/2017 concerning The Application of Risk Management in The Use of Information Technology by Commercial Banks, SEOJK No. 24/SEOJK.03/2023 concerning Assessment of Digital Maturity Level of Commercial Bank. These regulations serve as mandatory standards that all commercial banks in Indonesia must comply with.

As one of the banks providing digital banking services in Indonesia, XYZ Bank faces similar issues that has been highlighted in the study by Alzoubi et al. (2022). In order to manage those issues and to ensure that XYZ Bank complies with compliance requirements particularly concerning the implementation of information technology, XYZ Bank needs to have good IT governance.

However, in 2024, XYZ Bank experienced an IT incident that disrupt the business. Although the issue was mitigated promptly and financial and operational losses could be minimized, the incident was not handled in proper manner. The incident was not communicated, escalated, and reported to relevant stakeholders and regulator in due time which led to formal reprimand by OJK. This event highlights the weakness and underdeveloped condition of IT XYZ Bank's IT governance mechanism regarding process.

The consequences of underdeveloped IT governance were further shown in a separate case where XYZ Bank's plan to launch a new product was disrupted. Due to a lack of confidence in XYZ Bank's IT governance mechanism which has been recorded within previous annual audit by OJK, they rejected XYZ Bank's assessment result of low-risk product and ordered XYZ Bank to go through lengthy approval process. This hindered XYZ Bank's business development plan. These events show under-development of XYZ Bank's IT governance once again.

Both of these events emphasize the urgent need for a more structured and compliant framework to mitigate future risks and support its business objectives. This call is aligned with XYZ Bank management's strategy to improve IT governance and IT Risk Management as stated in XYZ Bank 2024 Annual Report (XYZ Bank, 2024).

Based on these concerns, this research will focus on how to improve IT governance of XYZ Bank. The study will examine how current IT governance of XYZ Bank and how XYZ Bank's IT governance could be improved to enhance regulatory compliance, mitigate risk, and support the organization's objective.

1.2. Research Problem

XYZ Bank, a digital bank in Indonesia, faces an underdeveloped IT governance condition. It is characterized by insufficient policy documentation, a lack of role accountability, and underdeveloped risk oversight processes. This aligns with the research finding of Borja et al. (2022) which shows that low IT governance mechanism would result in low performance of IT Risk Management and IT Compliance. This deficiency became evident following a disruptive IT incident in 2024, which was managed but not communicated, escalated, and reported properly, leading to a formal reprimand by OJK.

The second issue was XYZ Bank had planned to launch a new product and conduct self-assessment which result in low risk. This classification would allow for a simple notification to OJK rather than a lengthy approval process. However, because of the previously identified IT governance weaknesses confirmed by their annual audit, OJK lacked confidence in the result of bank's self-assessment. Consequently, OJK classified the product as high-risk and mandated a full approval process. This decision of OJK disrupts XYZ Bank's product launch plan and slows its business development. It hinders bank's strategic goal for rapid growth. Though the 2024 incident and the product launch delay are separate events, they share the same root cause: an underdeveloped IT governance framework that fails to ensure compliance and manage risk effectively which ultimately led to impeding business agility.

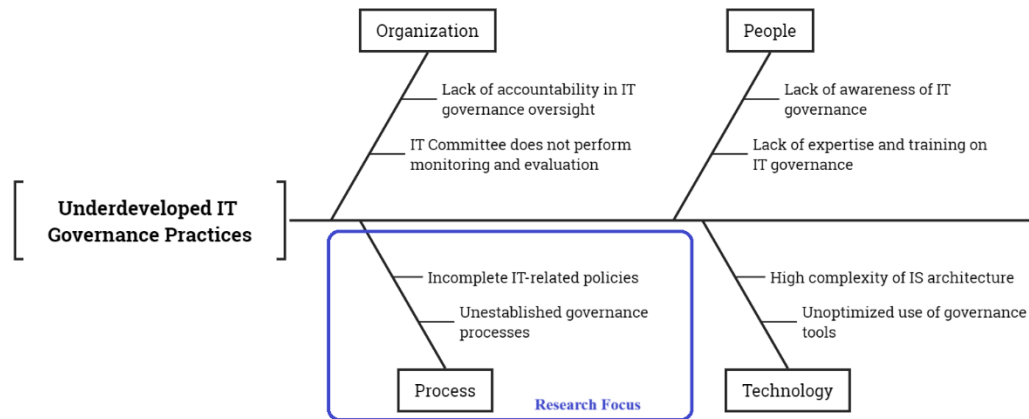


Figure 1.4. XYZ Bank Problem Analysis regarding IT Governance

As indicated by Figure 1.4, these problems are rooted in multiple areas including process, people, and technology. In the organization part, despite having a designated IT governance structure, XYZ Bank has not achieved the expected outcomes due to limited awareness and expertise among its key stakeholders. This under-development condition is worsened by the absence of proper IT governance tools and insufficient procedures. To ensure risk management performance and fulfilment of regulatory compliance, a robust and relevant IT governance framework is urgently required. This research seeks to identify the issue within XYZ Bank's current IT governance mechanism and design an improved IT governance process aligned with COBIT 2019 and related OJK regulations.

1.3. Research Objective

Considering the background and identified root-causes within this research, the objectives of this research would be:

1. To analyze the existing capability level of XYZ Bank's IT governance in priority processes identified through the mapping of OJK regulations to the COBIT 2019 framework.
2. To identify and measure the capability gap between the existing state (as-is) and the target state (to-be) of IT governance processes in XYZ Bank.

3. To produce a design artifact for IT governance in the form of proposed policies aligned with COBIT 2019 best practices to improve process capability and ensure regulatory compliance.

1.4. Research Question

The research questions that will be answered from this research are:

1. What is the existing state of IT governance processes capability at XYZ Bank when measured using relevant COBIT 2019 processes mapped against OJK regulations?
2. What is the gap between XYZ Bank's current IT governance processes capability and the target level required to ensure a defined and compliant process?
3. How can an IT governance process artifact be designed using the COBIT 2019 framework to close the capability gap and meet OJK compliance requirements?

1.5. Hypothesis

According to the research questions, the hypothesis would be:

H1: The existing condition of IT governance within XYZ Bank requires some improvement especially in the governance part.

H2: The design of XYZ Bank's IT governance would need to be tailored by considering several factors such as company's business strategy, compliance requirements, and organization condition.

1.6. Research Scope and Limitation

The scope and limitation of this research is:

1. The scope of this research would be the analysis and design of the IT governance processes of XYZ Bank. This artifact is intended to be practical solution to improve IT governance processes of XYZ Bank. However, the selection of IT governance processes is not arbitrary. This research will be focused on the

prioritized COBIT 2019 processes that result from a mapping against the related OJK regulations.

2. The limitation would be the research concludes at the design and evaluation and validation phase and will not involve the actual implementation of the proposed artifact within XYZ Bank. Thus, this research will not measure its practical impact post-implementation. Furthermore, the analysis does not cover all 40 governance and management objectives within the COBIT 2019 framework, as it is intentionally limited to the high-priority processes identified through the regulatory mapping. Finally, due to the sensitive nature of the case study, specific internal data such as XYZ Bank name, condition, and existing IT governance policies could not be disclosed within this research document and could only be used for analysis to protect the organization's confidentiality.

1.7. Significance of Study

As digital bank that processes financial and personal data of customers, XYZ Bank certainly faces a lot of risks and is required to be compliant with set of stringent compliance requirement. This research is expected to contribute both practically and academically.

1. For XYZ Bank, this research provides recommendations for improving IT governance processes capability levels and help the XYZ Bank to meet regulatory requirements thus it can strengthen the foundation for business growth.
2. For digital banking industry, the findings of this research can serve as a practical guide for the digital banks in Indonesia in implementing effective IT governance. It provides an example of mapping complex OJK regulations to the actionable COBIT 2019 framework.
3. For academics, this study enriches the literature study on the application of COBIT 2019 in the highly regulated industry, especially in digital banking sector.

1.8. Thesis Structure

This thesis proposal is organized into three chapters, as follows:

Chapter 1 INTRODUCTION

The first chapter provides an overview of the research topic, including background and objectives of the research. It also outlines the research questions and hypotheses in this research. Additionally, this chapter also discusses the scope of the research, significance of the research, and proposed timeline for the research.

Chapter 2 LITERATURE STUDY

The second chapter presents a review of existing literature related to the research topic. This chapter provides references of concept, related framework of the research, previous studies, and methodologies and synthesizes them to theoretical concept for this research.

Chapter 3 RESEARCH METHODS

The third chapter provides the methodology of conducting this research. It describes the research framework, data collection techniques, data analytic method, evaluation method, and validation method used in this research.

Chapter 4 RESULT AND DISCUSSION

The fourth chapter presents the research's empirical findings, including the collected data and the results of the data analysis in relation to the research framework. This chapter displays key results organized by each research question or hypothesis. Following the presentation of results, this chapter discusses how the findings confirm or challenge the theoretical frameworks introduced in Chapter 2 and elaborates on their practical implications.

Chapter 5 CONCLUSION AND RECOMMENDATIONS

The final chapter summarizes the research and its findings. It presents the conclusions drawn from the analysis, directly addressing the research questions. Furthermore, this

chapter provides actionable recommendations for PT XYZ based on the research outcomes and suggests potential avenues for future studies.

