CHAPTER 1

INTRODUCTION

1.1   Background

Digitalization continues to grow in the business world. Economic and business innovation is the main engine, especially in automation, robotization, and digitalization (Barczak et al., 2022). According to McKinsey & Company research (2020), 80% of businesses believe that for their business models to remain economically viable, they need to be digitized. Digitalization is "the adoption or increased use of digital or computer technology by an organization, industry, country, etc." (Brennen & Kreiss, 2014). One of the latest technological innovations that is revolutionizing digital business is Artificial Intelligence (AI). Artificial intelligence helps understand human intelligence by creating computer programs that simulate intelligent human behavior and enable electronic operations (Almaiah et al., 2022;Haenlein & Kaplan, 2019). AI can analyze data and automate tasks (Kok et al., 2002). In addition, AI is also capable of prediction through audio, text, and computational linguistic processing, and AI software systems can operate independently without human assistance (Rao & Verweij, 2017; Ottosson et al., 2020). Öztemel and Gursev (2020) also revealed that AI can improve its capabilities anytime based on past operating experiences. These benefits make AI an essential tool in business digital transformation that can help companies become more competitive, efficient, and responsive to market changes.

AI implementation will vary based on industry, goals, and available resources. The financial sector is one of those implementing AI. As stated in McKinsey's survey report titled The State of AI in 2022, financial services are the

industry that uses AI the most for product development. AI can help the financial services sector by improving efficiency, reducing costs, reducing errors, etc. Banks, a large part of the financial sector, are starting to innovate by implementing AI. A study by Anastasi et al. (2021) states that the application of AI in the banking industry can improve efficiency, accuracy, and personalized customer experience. AI brings many benefits to banking, such as assisting repetitive banking operation processes so that it can save time, improve and simplify the decision-making process, reduce the fraud process and the number of fake contracts, improve the prediction of operational resources, and identify fraud and errors (Vijai et al., 2020; Han et al., 2020). With these benefits, banks can improve their performance by enhancing the quality of operational processes.

A company's performance can be assessed, among other things, from its financial performance. By considering its financial performance, we can find out how business operations are carried out and what has been achieved from the business. Financial performance assessment is helpful for both internal and external parties. Financial performance assessment is carried out for internal parties through review and evaluation to see the company's prospects for survival and competition in the next period. In addition, financial performance is also helpful as a basis for strategic decision-making by management, operational control, budget design, and employee performance evaluation. On the other hand, external parties also benefit from this. For example, investors use financial performance as a benchmark for making investment decisions. Investors will tend to invest their capital if the financial performance is good. Capital intake benefits companies as additional

2

funds are needed to increase operational activities, which will increase profits. Therefore, financial performance is essential.

The company's financial statements contain the data needed to assess the company's financial performance. Companies that have gone public or made an initial public offering on the Indonesia Stock Exchange must submit their financial reports periodically to the Financial Services Authority (PJOK number 14 /POJK.04/2022). There are many indicators used to analyze the company's financial performance. Financial performance can be measured based on accounting and market measures. One indicator in measuring financial performance based on accounting is profitability. Profitability can be measured through Return on Assets (ROA). ROA measures the company's ability to generate net income using its total assets. For market-based measurement, the price-to-earnings ratio (P/E) can be used. The P/E ratio is a tool used to evaluate whether a stock is fairly valued based on the company's financial performance. A high P/E ratio may indicate that the stock is valued at a premium, while a low P/E ratio may indicate that the stock is valued at a discount. Therefore, the P/E ratio helps investors in measuring the valuation of a company's stock based on net income.

Besides the positive impacts, AI also has negative consequences. AI can lead to bias, lack of transparency, data privacy issues, and compliance challenges. Organizations must prioritize responsible AI practices, improve data quality and governance, and address potential biases. This is necessary to mitigate the negative impacts of AI. System accountability and transparency are essential to prevent stakeholder concerns from influencing decision-making. Transparency can reassure cautious investors in making assumptions based on technological information that

could affect company valuation and shareholder composition. In addition, transparent AI disclosure aligns with the evolving regulatory framework so that companies compliant with disclosing AI practices will create a solid corporate reputation (Meiryani et al., 2022).

AI disclosure is one of the efforts that can be made to overcome accountability and transparency issues. Unfortunately, AI disclosure is still voluntary. This means that the decision to disclose, the extent to which it should be disclosed, and the type of information to be disclosed are left to the company's discretion. This is due to the absence of specific agreed international reporting standards. Current AI disclosure practices still do not adequately capture the unique impact of AI.

A study conducted by Shiyyab et al. (2023) found three categories in the disclosure of AI-related terms. The first group includes digital awareness, transformation, and capabilities keywords. Meanwhile, the second group deals with AI applications, products, services, and processes. The last group focuses on AI information challenges and cyber security threats.

Several previous studies have been conducted to identify the benefits of AI in the banking industry. However, there are few studies on the impact of AI disclosure on financial performance, such as studies by Shiyyab et al. (2023) and Xu Q & Xu C (2023). These studies were conducted abroad; no similar studies have been conducted in Indonesia. This indicates that research needs to be expanded to determine the impact of AI disclosure on financial performance in general. Therefore, this study identifies the effects of AI-related terms disclosure from three categories on financial performance in banks listed on the Indonesia Stock

Exchange in 2020-2022. Assessment of financial performance requires data on financial statements so that the sample selected is a bank that has become go-public or is listed on the IDX. In addition, banks are a large part of the financial sector, where the financial sector is the sector that implements the most AI. The research period was narrowed to only three years (2020 - 2022) to make the research results more relevant to current conditions. Based on the background that has been formulated, the author is interested in conducting research entitled **"The Effect of Artificial Intelligence Disclosure on The Financial Performance of Bank Companies Listed on the Indonesia Stock Exchange**."

1.2   Problem Formulation

Based on the background described above, the problem formulations in this study are as follows:

1. **Does artificial intelligence (AI) disclosure influence the return on assets (ROA) of companies in the banking industry?**

   From this problem, the following problems branch out:

   1.1 Does digital awareness, transformation, and capabilities disclosure (AI-related terms category 1) influence the return on assets (ROA) of companies in the banking industry?

   1.2 Does AI application, product, service, and process disclosure (AI-related terms category 2) influence the return on assets (ROA) of companies in the banking industry?

   1.3 Does AI information challenges and cyber security threats disclosure (AI-related terms category 3) influence the return on assets (ROA) of companies in the banking industry?

2. **Does artificial intelligence (AI) disclosure influence the price-to-earning ratio (P/E) of companies in the banking industry?**

   From this problem, the following problems branch out:

   2.1 Does digital awareness, transformation, and capabilities disclosure (AI-related terms category 1) influence the price-to-earning ratio (P/E) of companies in the banking industry?

   2.2 Does AI application, product, service, and process disclosure (AI-related terms category 2) influence the price-to-earning ratio (P/E) of companies in the banking industry?

   2.3 Does AI information challenges and cyber security threats disclosure (AI-related terms category 3) influence the price-to-earning ratio (P/E) of companies in the banking industry?

3. **Does artificial intelligence (AI) disclosure influence banks' total operating expenses of companies in the banking industry?**

   From this problem, the following problems branch out:

   3.1 Does digital awareness, transformation, and capabilities disclosure (AI-related terms category 1) influence banks' total operating expense of companies in the banking industry?

   3.2 Does AI application, product, service, and process disclosure (AI-related terms category 2) influence banks' total operating expense of companies in the banking industry?

   3.3 Does AI information challenges and cyber security threats disclosure (AI-related terms category 3) influence banks' total operating expense of companies in the banking industry?

1.3   Research Purposes

Based on the formulation of the problem described above, the objectives of this study are as follows:

1. **To find out whether artificial intelligence (AI) disclosure influences return on assets (ROA) of companies in the banking industry.**

    From this purpose, the following purposes branch out:

    1.1 To find out whether digital awareness, transformation, and capabilities disclosure (AI-related terms category 1) influence return on assets (ROA) of companies in the banking industry.

    1.2 To find out whether AI application, product, service, and process disclosure (AI-related terms category 2) influence return on assets (ROA) of companies in the banking industry.

    1.3 To find out whether AI information challenges and cyber security threats disclosure (AI-related terms category 3) influence return on assets (ROA) of companies in the banking industry.

2. **To discover whether artificial intelligence (AI) disclosure influences price-to-earnings ratio (P/E) of companies in the banking industry.**

    From this purpose, the following purposes branch out:

    2.1 To discover whether digital awareness, transformation, and capabilities disclosure (AI-related terms category 1) influence price-to-earnings ratio (P/E) of companies in the banking industry.

    2.2 To discover whether AI application, product, service, and process disclosure (AI-related terms category 2) influence price-to-earnings ratio (P/E) of companies in the banking industry.

2.3 To discover whether AI information challenges and cyber security threats disclosure (AI-related terms category 3) influence price-to-earnings ratio (P/E) of companies in the banking industry.

3. To detect whether artificial intelligence (AI) disclosure influences banks' total operating expenses of companies in the banking industry.

From this purpose, the following purposes branch out:

3.1 To detect whether digital awareness, transformation, and capabilities disclosure (AI-related terms category 1) influence banks' total operating expenses of companies in the banking industry.

3.2 To detect whether AI application, product, service, and process disclosure (AI-related terms category 2) influence banks' total operating expenses of companies in the banking industry.

3.3 To detect whether AI information challenges and cyber security threats disclosure (AI-related terms category 3) influence banks' total operating expenses of companies in the banking industry.

1.4 Research Benefits

This research is expected to provide the following benefits:

1. Theoretical Benefits

For academics, this research can be a literature that provides empirical evidence related to the disclosure of Artificial Intelligence with the Company's Financial Performance, which can be a reference for further research. This research is expected to be a reference in information system literature, especially in accounting.

8

2. Practical Benefits

   a. Company

   This research is expected to be a consideration for companies to implement and disclose the Artificial Intelligence usage, which will affect company value.

   b. Investors

   Investors can use this research as a reference that can provide information and knowledge as a material consideration in deciding to invest in companies with better financial performance and long-term growth.

   c. Government

   This research is expected to be considered in making policies and standards related to disclosure of information about Artificial Intelligence.

1.5 Writing Systems

This study uses writing systematics consisting of five chapters. Chapter 1, Introduction, explains the background of the problem of disclosing terms related to artificial intelligence (AI). The author is interested in conducting this research due to AI's significant progress and application in various industry sectors. This study focuses on the impact of voluntary AI disclosure on financial performance. Additionally, this chapter details the formulation of the problem to be studied, the objectives of the study, the benefits of the study, and the writing structure used in this research.

Chapter II, Literature Review, addresses hypotheses related to the study issue that will be researched. This chapter examines applicable ideas forming the basis of research for each variable under examination, in addition to pertinent theories. It also discusses the framework and methods used by the author in building hypotheses for this investigation. The author cites books, journals, and other research-related materials as sources for developing these theories and concepts.

Chapter III, Research Methodology, encompasses the author's choice of research methods, including the independent and dependent variables used. Additionally, this chapter details the research type, the object of study, types, sources of research data, the study's population and samples, and the data collection and analysis techniques applied in this research.

Chapter IV, Research Result, describes the author's research findings. The conclusions produced are the outcome of processing the data that has been gathered and processed in line with the technique employed so that it may define the relationship between the variables researched and support the prior hypothesis.

Chapter V, Conclusion, summarizes the research and some limitations and inadequacies in the study that the author encountered when investigating the influence of AI-related term disclosure on financial performance. This chapter also contains suggestions for further research.