The Role of Enterprise Risk Management And Digital Transformation On Sustainable Banking In Indonesia

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ABSTRACT

This research investigates the role of Enterprise Risk Management and Digital Transformation in banking sustainability in Indonesia. Banking demands good performance from its owners and shareholders to carry out operational activities on an ongoing basis. In this study, the target population is the Indonesian Banking Sector, which has a digital banking transformation experience. The data was collected by administering questionnaires to the Director/Manager/Division Head/Branch Head of the company. Data were analyzed using descriptive and verification analysis using Partial Least Square (PLS) Structural Equation Modeling (SEM). Additional moderation analysis was also employed to examine the element of mediation. The findings reveal that Enterprises Risk Management and Digital Transformation Banking significantly and positively influence banking sustainability in Indonesia. The Moderation Variable used is that knowledge management cannot improve the relationship between Enterprises Risk Management and Digital Transformation Banking on Banking Sustainability in Indonesia. The issue of sustainability in the financial services involve many aspects; therefore, the key to the sustainability strategy is the awareness from the banking sector of relevant impacts and robust risk management. Technological developments in the banking sector have significant implications for banking which have an impact on corporate survival.

Keywords: Enterprises Risk Management, Digital Transformation, Knowledge Management, Sustainable Banking.

1. INTRODUCTION

The issue of sustainability in the financial services sector covers various aspects. The awareness of pertinent impacts and the concept of proper risk management is the key to the sustainability strategy, particularly today where the market is more challenging with higher public scrutiny and sensitivity to failure. Opportunities for sustainability and risks faced by financial sector institutions can be seen from how financial institutions manage their operational risk to be efficient and manage reputation risk with regulatory compliance so that the reputation of products and services is expected to improve; a sustainable operational model can be differentiated thereby automatically increasing the value company, (PWC, 2012).

Risk management in banking financial institutions must be effective because improper risk management practices will adversely influence the economy globally (Bezzina et al., 2014; Fraser and Simkins, 2010). Hence, the risk management discipline is now more important, especially in the financial sector (Marsh, 2009). This is because the counterarguments regarding effective risk management have succeeded during the global crisis. It emphasizes that an effective risk culture and integrated corporate mechanisms are converted to value-added performance and high economic returns. As a result, the crisis did not affect some countries, and economic growth is rising despite a recession (World Economic Forum, 2009; Bezzina et al., 2014). Studies on risk management in financial institutions has mainly discussed the concept of strategic risk management, "integrated risk management, and corporate risk management as issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2017).

Risk management is needed in line with the increasing complexity of the external environment and other changes that can affect banking activities (Cahyaningtyas et al. 2017). Assessment of risk profile factors means evaluating the inherent risk, and the quality of risk management applied in bank operational activities. The types of risks managed by banks in Indonesia based on article 4 paragraph (1) POJK Number 18/POJK.03/2016 include credit risk, market risk, liquidity risk, operational risk, legal risk, strategic risk, reputation risk, compliance risk. If the risk is managed properly, it is expected to provide a good signal and can increase the value of the company that's impacted to going concern. The ERM framework is a continuous work requiring monitoring activities for sustainable development (Shortreed, 2010). In addition, ERM should be integrated into strategy execution systems, "enabling firms to be more proactive and flexible in managing the uncertainties associated with their strategies unfolding" (Beasley and Frigo, 2010). Horcher (2005) argued that risk assessment is critical in designing an effective risk management strategy. Yet, he emphasized that risk assessment only proves effective when properly employed to determine responses.

Technology development has forced the banking industry to transform into digital banking to maintain the viability of the company so that it remains sustainable and survives. The digital economy is growing rapidly; with technology-based transactions and the rising of the digital economy, business models encourage economic sharing among business people. Banking is also progressing and collaborating to improve systems and strategies, so people can experience the ease of transactions using technology. Consequently, competition between banks and financial institutions in application technology increases as the implication of the banking business development.

Technological developments in the banking sector affect banking marketing efforts (Dootson et al., 2016), especially in Digital Banking (DB), as it is related to customer service. DB via telephone, internet, and mobile is now the main way of providing services, challenging the conventional banking model (Cortinas et al., 2010). In addition to improving customer service in digital banking services, innovations are emerging in the banking sector through digital banks. The convenience offered in this digital banking service is an increase in capability followed by alignment of business strategies that are more targeted to encourage effectiveness and efficiency and create continuity of service to customers.

Some previous research findings reported that mobile and internet banking had become the main DB service channels which are very important for the survival of banking (Sundarraj and Wu, 2005; Daniel, 1999; Mols, 2001). Several studies researched marketing and service quality, the relationship between customer satisfaction and loyalty, such as research conducted by (Jun and Palacios, 2016; Amin, 2016), then on bank financial performance (Keisidou et al., 2013) and especially customer experience (Klaus and Maklan, 2013; Garg et al., 2014) which has a different focus from research on banking sustainability.

The assessment of banking sustainability is the focus of this research by adopting the sustainability framework issued by PWC in 2012 because PWC is one of the best Public Accountant Firm in the world that has conducted assessments of banks in various countries, the assessment framework issued by PWC has been adjusted with the sustainability policy issued by OJK, while banking companies are the focus of research with considerations. First, as part of the financial system, banks provide liquidity to the economy on the asset and liability side (Berger & Bouwman, 2009). Banks provide funding for those with a deficit and offer liquidity management for those with a surplus. Second, the financial system of developing countries, especially Indonesia, is generally dominated by the banking sector, so the condition of the banks reflects the development of state finances (Beck & Levine, 2004). Third, considering the contribution of banks to a country's economy, the sustainability of bank operations is an important issue. Previous studies have revealed that investing in sustainability aspects improves the performance of banks in developing nation (Azmi et al., 2021; Shakil et al., 2019).

To deserve business function management, knowledge, and competence are required in managing and overseeing the effectiveness of risk management and quality control systems and building strategic IT related to business capabilities and competitive advantage both in the medium and long term. The competitiveness will ensure the company's survival in a sustainable manner (sustainability banking). Knowledge Management (KM) is the knowledge seen as a potential resource that significantly contributes to a company's competitive advantage (Paswan and Wittmann, 2009). KM orientation is an organizational capability in organizing the organization, sharing knowledge, and creating a learning culture (Wang and Ahmed, 2009), the effects of outcomes such as innovation and performance (Darroch and McNaughton, 2003). Developing and sustaining KM is paramount for a company's success and survival (Lin, 2005). Knowledge has been recognized as a critical resource for strengthening a company's position and finance (Darroch, 2005). This research proposes a KM as a multi-dimensional construction with a learning orientation, knowledge sharing, innovation, and orientation to environmental change.

Sustainability banking research is currently popular research; almost all developed and developing countries pay full attention to the sustainability of financial institutions. However, the results of these studies contain many contradictions both in theory and empirical results. Tan et al. 2017 case study at Maybank

Malaysia explain a discrepancy between theory and past research and sustainability banking practice; Maybank is in a preventive stage leading to an offensive stage in sustainability banking. Weber et al. (2010), in empirical research, concluded that sustainability criteria can estimate financial performance and increase the predictive validity of the credit process because the sustainability of a company shows that it influences credit as part of its financial performance. Based on the background above, research on sustainability banking is very interesting for further research, so it becomes a strong motivation in evaluating banking sustainability in Indonesia. This research discusses how enterprise risk management and digital banking transformation affect sustainability banking in Indonesia which is moderated by knowledge management; where this study will produce scientific evidence regarding the assessment of sustainability banking in Indonesia to apply the principles of financial sustainability by increasing corporate risk management, and good quality control, as well as transformation towards the era of digital enterprises with latest technological advances, necessitate corporate management responding appropriately to remain competitive.

2. LITERATUR REVIEW
a. The Stakeholder, Legitimacy, and Institutional Theory

Stakeholder theory demonstrates parties, both groups, and individuals influencing or influenced by the success of organizational and company goals (Freeman, 2001). In fact, a company needs to maintain relationships with stakeholders by catering to their demands, especially stakeholders who influence the direct resources for the company's operational activities, such as workers, customers, and owners (Ghozali and Chariri, 2007). Therefore, an organization can only survive with the support of existing stakeholders, so the company must seek this support. One strategy to be implemented is disclosing sustainability which contains an overview of economic, social, and environmental aspects. Transparent sustainability reports by companies can fulfill the desires or information needs of stakeholders to produce harmonious relationships between companies and stakeholders; with good relationships, an organization can achieve sustainability in the future. Legitimacy theory makes a lot of platforms in carrying out sustainability; Milton Friedman (1970) argued that companies are in charge of increasing profits for shareholders, and Trevino and Nelson (1995) asserted that management should praise profits without conflicting with the local community. Per the legitimacy theory, organizations are constantly striving to guarantee that they function within the regulations and standards of the societies. Under the legitimacy theory, a company would disclose its activities voluntarily if management believed that those practices were anticipated by the communities where it conducts business. The legitimacy theory offers a strong procedure for acknowledging a company's social and environmental disclosures (Deegan 2002; Deegan, Rankin, and Voght 2000; Cormier and Gordon 2001; Tilling (2004). Barkemeyer (2007) mentioned two aspects of the organizational legitimacy theory in the light of corporate social responsibility in developing nations. First is the ability to place profit-maximizing motives, and a better image of a company's inspiration in growing its social responsibility emerges. Next, organizational legitimacy might include cultural variables that affect institutional pressures in various contexts. To achieve legitimacy goals, the company must adhere to regulations or norms and emphasis the aspirations of the local community (Cong & Freedman, 2011; & van Staden, 2006). A theoretical framework analyzes social phenomena (especially organizations) by looking at the social world significantly, which consists of rules, practices, and structures that govern the conditions for each action (Lawrence and Shadnam, 2008). This theory explains that the institutional environment influences the formal structure of the organization compared to pressures that come from the market. Effectiveness will be achieved if the structure of the organization is innovative and, at its peak, will achieve legitimacy status. For an organization, legitimacy status is very important because it affects the organization's sustainability.

b. Sustainability Banking

The concept of sustainable development used by companies was first released in 1987 by the World Commission on Environment and Development (WCED), which is a process that significantly improves the benefits of natural and human resources sustainably by realigning human activities with the supporting natural resources including land, sea, and air as a single unit. Thus, sustainable development can be carried out to balance the environment, economy, and society in the long term, or called the triple-bottom-line (Elkington, 1997). The banking sector in Indonesia has begun to incorporate environmental and social considerations into their business following the 'First Steps to become a Sustainable Bank' regulation initiated by the Financial Services Authority of the Republic of Indonesia (OJK) in 2015. Now, the Indonesian government is preparing an instrument for climate change funding that can rise the commercial value of the sustainable investment. It is hoped that the commitments outlined in this initiative can become a strategic forum related to providing access to funding and various other incentives; sustainability risks and opportunities have become imperative, and hot issues have become global trending topics for business (Aras and Crowther, 2009).

In Indonesia, on 31 May 2018, eight national banks (46% of Indonesian banking assets) established the Indonesian Sustainable Finance Initiative (IKBI), incorporated in the 'First Movers on Sustainable Banking' group. IKBI is realizing the Indonesian banking commitment to inclusive and sustainable financial practices in the financial services sector. This study assesses banking sustainability using the roadmap from PricewaterhouseCoopers (PWC) regarding sustainability for banks. Selection of assessment based on PWC because (1) PWC is one of the best Public Accountant Offices in the world that provides audit and other assurance services to the financial institution sector, and almost all banks in Indonesia use the services of PWC, (2) Roadmap made by expert professionals who are also strategic advisors, auditors, and industry practitioners providing detailed knowledge on sustainability aspects in the Financial Services industry, (3) the quality of PWC's network in all areas worldwide across countries and leading.

c. Enterprise Risk Management (ERM)

Risk management define, assess, oversee, and mitigate risk emerging from the Bank's business operations (POJK, 2016). The possibility of harm, loss, injury, or other adverse outcomes is referred to as risk; financial institutions mainly face credit risk, market risk, interest rate risk, liquidity risk, and operational risk. (Bessis, 2002). Local regulatory and international regulatory frameworks dictate financial institution risk management; for example, in Indonesia, it is regulated by Bank Indonesia and the Financial Services Authority (OJK). The relationship between management control can affect ERM practice and is becoming a concern and rapidly growing as research (Williamson, 2004; Collier et al., 2004; Soin, 2005; Collier and Berry, 2002; McWhorter et al., 2006; Mikes, 2006). The Bank expects to best assess and manage the risks associated with its business operations by implementing risk management.

Furthermore, the risk management the banks apply will boost the efficacy of the risk-based bank supervision framework applied by the Financial Services Authority. Attempts to enforce Risk Management are for the benefit of the Bank and its customers. Transparent information concerning the Bank's products or activities is crucial in safeguarding customers' needs and risk control. Risk management implementations may differ between banks, depending on objectives, business policies, business size and complexity, financial capacity, supporting infrastructure, and human resource capabilities. The Financial Services Authority specifies this provision as a basic requirement Indonesian banks must satisfy in risk management. Banks should do their activities using an integrated and comprehensive risk management system (POJK, 2016). This study uses COSO 2017 due to the ERM framework, which includes a comprehensive (entity-wide) and substantial risk assessment of each organization's strategic initiatives and business plans. In addition, ERM 2017 formulates an excellent comprehensive and integrated enterprise business strategy planning alliance along with the execution of banking strategies. A reliable ERM information system will provide added value when the business/strategy execution is implemented by the company so that the company can achieve the vision and mission according to the performance (Bessina, 2019).

d. Digital Banking Transformation

Implementing a digital transformation needs support from various parties to ensure that the change goes well and correctly. Support from the government as a whole, in terms of regulation, will help form a comfortable ecosystem for business actors carrying out a digital transformation. Digitalization also offers an era of the digital economy that is instant, fast, and transparent. Public transportation services and online-based delivery couriers can be said to be only a small part of the procession of the digital economy ecosystem. In the current digital era, no work or activity can avoid digital equipment. The International Data Corporation Indonesia (IDC) Research Institute estimates that a third of companies worldwide will lose their business unless transforming digitally. Likewise, financial institutions, such as banks. Digital transformation is required for all companies to avoid falling behind. Furthermore, in this digital era, almost all start-up companies have integrated the digitalization of technology. They are gearing up to compete with larger businesses that have not yet completed a digital transformation. Digital technology, on the other hand, seems to serve as a remedy to this phenomenon by facilitating new businesses driven by these technologies (Chauhan et al., 2018). For example, the presence of fintech and online businesses. In this study, digital banking transformation adopts from Cajetan's (2019) research related to digital banking and the customer experience in financial institutions in Europe.

e. Knowledge Management

Knowledge management enhances one's or organization's performance by managing and providing recent and future knowledge resources. Thus, it is not a new phenomenon but rather a method of integrating technology and reliable sources. The performance of an organization would be well-secured with knowledge management. Knowledge is a critical resource that can to improve the competitiveness of a company's

position and financial performance (Darroch, 2005). To achieve excellence, researchers highlight the significance of introducing innovative knowledge within the company to provide fresh goods and services, distinguishing it from competing companies (Birasnav, 2013). Organizations in developing markets face uncertainty, complexity, competition, and rapid changes (Obeidat et al., 2016). Based on a knowledge-based view of the firm (Grant, 1996), knowledge-related resources have long been accepted as a key strategic asset that adds value to great organizational performance and long-term competitive edge in the dynamic and challenging environment (Donate and Guadamillas 2015; Obeidat et al., 2016). Previous studies in commercial indicate that a unified and consistent KM strategy involving KM management and processes is crucial for guaranteeing effective KM results in enhanced innovation and competitive edge (Valaei et al., 2017; Martelo-Landroguez and Cepeda-Carrión, 2016; Ngah et al., 2016; and commercialization of products or services to achieve competitive advantage) (Allocca and Kessler, 2006). Innovation quality is the performance of the mechanisms associated with innovation and the outcome (Haner, 2002). Previous research (e.g., Wang, Sharma, and Cao, 2016; Wang, Wang, Cao, and Ye, 2016; Wang and Wang, 2014) argued that the rapidity and excellence of innovation are essential components in converting the influence of KM processes on firm performance.

f. Hypotheses Development

Sustainability has been successfully applied in financial services institutions. Hence, the essence of a sustainability strategy is knowing the relevant affected areas and the appropriate risk management concepts for banking organizations. ERM is more an aspiration than a reality, as proved by the failure during the 2008 financial crisis of large companies claiming to have applied sophisticated ERM frameworks. It can be said that organizations have not applied ERM effectively, as reported in research conducted by McShane (2018). In today's highly competitive market, with rising public criticism and sensitivity to failings in any banking institution, any shortfall can lead to substantial monetary, reputational, and institutional risks. Bezzina et al. (2014) reported that Maltese financial firms have sound risk management practices and have a positive relationship with added value and performance. Teschner et al. (2008) argued that Financial institutions must foster a powerful risk culture driven by organizations' risk appetite, leadership, and communication to successfully navigate financial crises. Furthermore, Razak et al. (2019) found that the strategic risk management framework has implications for developing company sustainability and its performance which focuses on company resources based on resource theory, ERM to add organizational value needs to be integrated into the strategy execution system, thus "allowing companies to be more proactive and flexible in managing the uncertainties associated with their strategies unfold" (Beasley and Frigo, 2010). One of the current banking strategies is to maintain sustainability in the future. In carrying out its vision, it requires effective risk management. Companies must enhance their performance through risk management in their business activities, process planning, reporting, and other policies.

H1: Enterprises risk management has a positive effect on Sustainability Banking in Indonesia

In the current digital era, no work or activity is separable from digital equipment, including household life to office and government activities. The International Data Corporation Indonesia (IDC) Research Institute predicted that 33% of Global corporations would fail if they do not adopt cloud technology and undertake digital transformation. Hoehle et al. (2012) noted that while DB channel utilization has grown substantially, previous research has failed to determine all customer-related problems and is limited due to the fragmented findings and research methods. On the other hand, Piyathasanan et al. (2015) claimed that some guidelines to enhance consumers through digital banking are available. Reichheld (2003) showed that enhancing customer services can increase profit. Therefore, companies must transform towards digital by increasing technological devices to survive. El Sawy and Pereira (2013) argued that these tools and technologies are necessary for competing and surviving in the global economy. To be considered as having a strong competitive edge, a digital business must be part of the appropriate digital ecosystem. Cajetan et al. (2019) found that digital banking at banks in the UK is significantly related to customer experience, satisfaction, and loyalty, so it has implications for the Bank's financial performance. Digital Banking enables banks to develop customer services, cutting delivery, travel, and face-to-face customer transactions costs. They expect equal interaction across digital banking and social media (Dootson et al., 2016). Companies that use digital technology decrease transaction costs and increase efficiency (La TTI, 2016). Digital economy enterprises usually have a business model where changes in digital technology cause fundamental transformation in business activities carried out by the companies and how they generate revenue (Veit et al., 2014). In addition, Lasch et al. (2007) studied the determinants of the growth of start-ups in France and found that advances in digital technology changed people's lives in France. Remane et al. (2016) argued that new kinds of digital business models have emerged. Thus, digital banking transformation can improve bank performance and affect the survival of banking in Indonesia. The following is the proposed hypothesis.

H2: Digital Banking Transformation has a positive effect on Sustainability Banking in Indonesia

Skills related to people, leadership, business, and communication are business competencies to maintain business continuity (Daniels, 2007). A knowledge management system allows for identifying, creating, communicating, socializing, measuring, and improving internal knowledge to support strategic goals (Hislop et al., 2018). In addition, according to Schein (1985), a board of directors who fully comprehend the company's philosophy must empower the risk culture. Furthermore, effective and knowledgeable leaders must communicate and push risk appetite via resource accountability (Pritsch et al., 2008). Levy et al (2010) argued that a company's risk culture depends on the quality of its risk management policies and guidelines Hopkin (2010) highlighted that determining risk appetite is the first step in developing an effective risk strategy. Investment opportunities, acceptance of controls, and the company's identified hazard tolerance levels affect risk appetite. In addition, Hopkin contended that risk is managed systematically by considering the factors that lead to harm and opportunity. Hagigi and Sivakumar (2009) emphasized that effective risk management is broader than the ability to minimize risk; it is the ability to design proper risk strategies for the organization according to its objectives and preferences. One important qualities required to ensure effective ERM is to include corporate resource factors such as skills and abilities in managing risk management (Knight, 2007). Beasley et al. (2005) revealed that the skills and knowledge of the team on a typical resource were consistent with Hoyt and Liebenberg's (2011) study, reporting that the skills and knowledge of the senior management team, such as the chief risk officer had a positive relationship to ERM implementation and effectiveness while Kleffner et al. al. (2003) also emphasized senior management skills, such as chief risk officer as a risk champion leading the company to the perceived effectiveness of ERM practices to run well and the sustainability of its business can be maintained. Previous research and literature reviews indicate that achieving the objectives of the effectiveness of ERM implementation requires adequate knowledge management from skills, leadership, learning, and strategic planning, so the hypothesis proposed is as follows.

H3: Knowledge Management strengthens the effect of Enterprises Risk Management on Sustainability Banking in Indonesia

Creating a knowledge management system allows for identifying, creating, communicating, socializing, measuring, and improving internal knowledge to support strategic goals (Hislop et al., 2018). A systematic approach to knowledge management, best practices, and standard operating procedures are beneficial for the organization. The advancement of technology and the internet should be viewed as a challenge and a catalyst to be creative. Digital technologies, on the other hand, remedy this trend by fostering the emergence of new groups of technology-based companies (Chauhan et al., 2018). The digital world has entered the financial industry, such as e-commerce, and financial technology companies (fintech), whose transactions are increasing daily. Meanwhile, in the banking industry, the challenges in the digital world are getting tougher. Banks must compete with other banks and other technology-driven financial companies, providing security and convenience to their customers. Thus, the commitment of bank management is needed to improve skills, employee competence and innovation, and learning so that they can excel in competition and for the sake of bank sustainability (Rouse, 2011). Veit et al. (2014) stated that a business model is when changes in digital technology transform the mode of business operation and how income is generated; banks must therefore be ready to transform into the world of digitalization to increase their income. The current study shows the importance of structured innovation management in organizations via governance structures and knowledge management to fulfil the local and global market demands (Singh and Gaur, 2013; Mukherjee et al., 2018). The research results show that start-up companies are better equipped to detect changes in the business environment and translate that knowledge into innovative products and services that fulfill market demands (Teberga et al., 2018). For this reason, good knowledge management in organizations relies on digital method development practices to increase efficiency and effectiveness (Oliva, 2014; Prado et al., 2017). Hence, the hypothesis in is as follows.

H4: Knowledge Management strengthens the effect of Digital Banking Transformation on Sustainability Banking in Indonesia

3. RESEARCH METHOD

This type of research is quantitative research because this research aims to develop theoretical models and hypotheses related to phenomena that provide a robust relationship between empirical observations and mathematical expressions. This research is explanatory survey research explaining the causal relationship and hypothesis testing (Singarimbun and Efendi, (1995); Amerieska & Nurhidayah, 2014). The research location is the industrial banking sector registered with the Financial Services Authority

in Indonesia. The target population is all executive officers who hold positions in the company, including directors, division heads, department heads, branch heads, and managers. Questionnaires were distributed to the entire study population in various ways: social media (Linked In, WhatsApp, and Google form), visiting the respondent directly through the official contact person or e-mail of each company.

The instrument for interviews was a pre-prepared questionnaire with a Likert scale (1 to 6). According to Cooper and Schindler (2006; 467), interquartile range distributions can calculate centralization measures for ordinal or interval/ratio data with asymmetric distributions. The range of Likert scales was used with alternative answers; Strongly Disagree (1), Disagree (2), Disagree (3), Somewhat Agree (4), Agree (5), Strongly Agree (6). The operationalization of variables describes the development of research instruments, including making meaning of a construct by determining the required activities to measure the construct (Kerlinger, 1992). Thus the operationalization of variables is the activity of formulating variables to determine the indicators attached to these variables. Operationalizing a concept means examining the dimensions of behavior and aspects indicated by the concept which are later transformed into observable and measurable indicators to create a measurement index (variable) (Sekaran, 2003).

The dependent variable (Y) of this research is sustainability banking. To measure this variable, respondents were asked to fill out several questions designed regarding the issue of sustainability banking taken from PWC sustainability (2012 and 2016) as an institution that participates in providing assessment services to all banks in the world regarding sustainability. The measurement uses three main dimensions, and 12 indicators consist of (1) Sustainability Banking Assurance, (2) Delivering on Public Commitments, (3) Transparency, (4) Indirect Social and Ethical risks, (5) Corporate Responsibility & Data Quality, (6) Responsible Customer Management, (7) Ethical Conduct, (8) Bribery and Corruption, (9) Employee Wellbeing, (10) Sourcing, (11) Outsourcing and Offshoring, (12) Climate change, Environmental Management Indirect Environmental Impacts and Stakeholder Engagement and Communication. Independent variables (X1) are enterprises risk management, a series of methodologies and procedures used to identify, measure, monitor, and control risks arising from all Bank business activities (POJK, 2016). In this study ERM using by COSO 2017 framework with dimensions (1) Governance and Culture, (2) Strategy and Objective Setting, (3) Performance, (4) Review and Revision, (5) Information, Communication, and Reporting. The next variable, digital banking transformation (X2), was measured through banking experience refer to Cajetan 2018. Digital banking is adopted and developed to meet customer needs to maintain the company's continuity. Additional testing is done through knowledge management as moderating variables. Knowledge management is included in this study to see whether knowledge management ensures good performance in an organization. Knowledge is a critical resource to improve the competitiveness of a company's financial position and performance (Darroch, 2005). Knowledge management in this study is measured using four dimensions which are (1) Learning Orientation, (2) Knowledge Sharing, (3) Organizational Memory (4) Knowledge Reuse. Knowledge management was taken from Farooq (2019).

In this study, data were analyzed using two methods: (1) descriptive analysis to explain the characteristics of the variables studied, (2) Partial Least Square (PLS) Structural Equation Modeling (SEM). The PLS-SEM consists of the measurement model (outer model) and the structural model (inner model). The outer model is a reflective measurement model to meet the convergent and discriminant validity.

The analysis undertaken were (1) composite reliability to examine the accuracy, consistency, and accuracy of the instruments in measuring constructs, with cut off value is 0.7) (Hair, Hult, Ringle, & Sarstedt, 2014), (2) reliability indicators with R^2 values (above 0.5) (Hair et al., 2014), (3) convergent validity using AVE (Average Variance Extracted) where the value must be above 0.5 (Hair et al., 2014), (4) discriminant validity. The inner model examines (1) collinearity, with the tolerance value (VIF) for each construct predictor must be above 0.20 (below 5), (2) the hierarchical component model, with formative dependent variable, and a two-stage approach is used (Hair et al., 2014), (3) bootstrapping to examine the significance of the path coefficient (minimum 5,000 samples), (4) the coefficient of determination (R^2), with 0.25 interpreted as weak, 0.50 as moderate, and 0.75 as substantial predictive accuracy (Hair et al., 2014). In this study, the hypothesis was tested by proposing a hypothesis in the structural model. Suppose the path coefficient is above or equal to zero, Ho is rejected. The model of PLS SEM is presented in Figure 1.
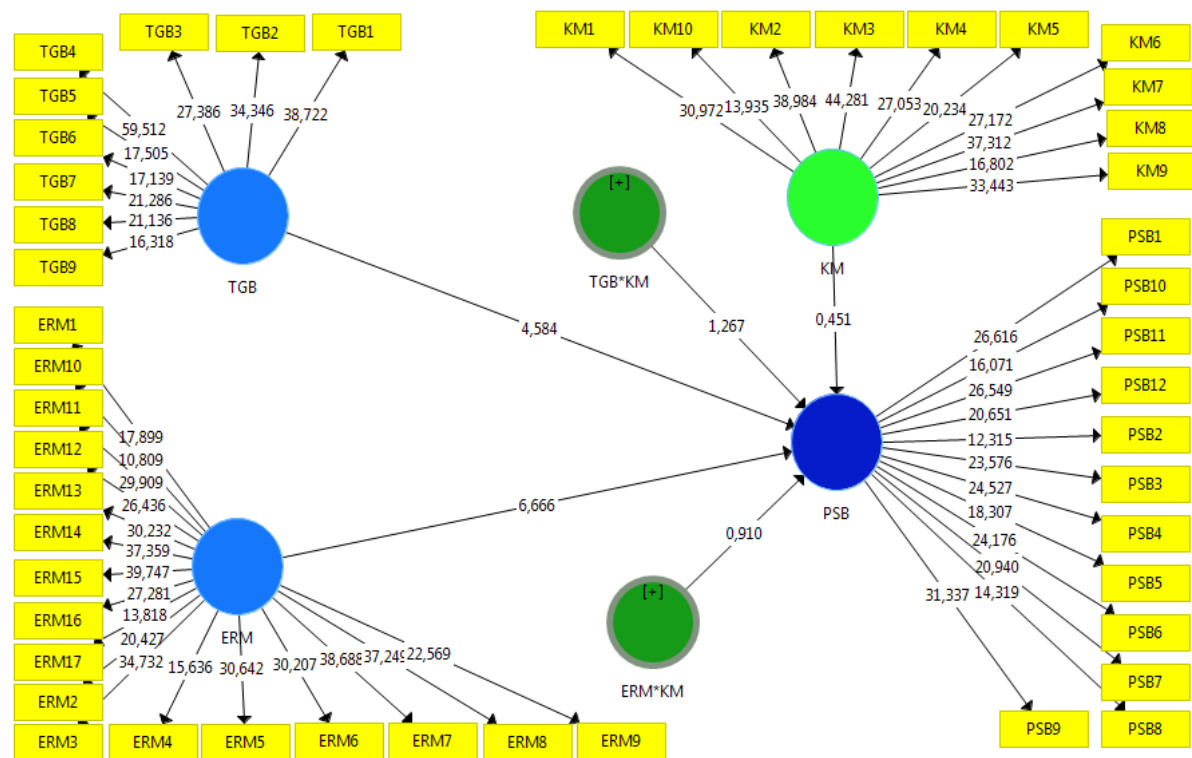
Figure 1. ERM: Enterprises Risk Management, TGB: Digital Banking Transformation, KM: Knowledge Management, PSB: Sustainability Banking

4. RESULTS AND ANALYSIS

a. Profile of Respondents

The characteristics of respondents cover their current position, length of work, and educational background. The respondents were Director or equal with Heads of Corporate Divisions (2.8%), Unit heads (13.2%), heads of Branches (6.1%), and Managers (77.9%). The respondents were dominated by those with more than ten years of working experience (54.8%). In terms of the level of education, the majority hold Bachelor / Master / Doctor (96.9%).

b. Analysis Description Test

The recapitulation of respondents' responses on the dependent variable of sustainability banking in this research I presented in Table 1

Dimension	Average
Improve Customer and Staff Satisfaction	5.09
Brand Reputational Risk	4.66
Regulatory Risk Protection	5.30
Total Average	**5.03**

Table 1. The SAverage Rating Scores of Respondents in the Sustainability Banking

Table 1 shows the total average score for the responses to the sustainability banking assessment is 5.03, categorized as the "Good" category because it is between the 5-6 values. Based on the total score of answers for each dimension, it is known that the respondent's highest rating is on the Regulatory Risk Protection dimension with an average value of 5.30, and the lowest respondent's rating is on the Brand Reputational Risk dimension with an average value of 4.66.

Table 2 presents the average of respondents' responses on the independent variable of enterprise risk management in this research in the banking sector.

Dimension	Average
Governance and Culture	5.38
Strategy and Objective Setting	5.21
Performance	5.29
Review and Revision	5.29
Information, Communication, and Reporting	5.29
Total Average	**5.29**

Table 2. The Average Rating Scores of Respondents in the Enterprise Risk Management

The main average score of responses to enterprise risk management is 5.29. Based on the total score of answers for each dimension, it is known that the respondent's highest rating is on the Governance and Culture dimension (M=5.38), and the lowest respondent's assessment is on the Strategy and Objective Setting dimension (M=5.21).

The results recapitulation of the questionnaire from respondents on the independent variable of digital banking transformation in this research showed that the overall score of respondents' answers to the Digital Banking Transformation variable is an average value of 5.30 and is included in the Strongly Agree category. Judging from the acquisition of the score, the highest rating is in the statement "Digital banking transformation can reduce company operational costs and as a profitable system investment in the future" (M=5.40), and the lowest rating is in the statement "I feel more confident when conducting digital banking transactions compared to traditional transactions over the counter" (M=5.06). Based on the total score of the answers for each dimension, it is known that the respondent's highest rating is on the Digital Banking Innovation dimension (M=5.40), and the lowest respondent's rating is on the Perceived Risk dimension (M=5.06).

Indicators	Average
Perceived Risk	5.06
Digital Banking Innovation	5.40

Table 3. The Average Rating Scores of Respondents in the Digital Banking Transformation

In this research, we conduct an additional test with knowledge management as a moderating variable (M= 5.25 or Strongly Agree). The highest assessment is found in the statement, "Knowledge management is the ability to acquire knowledge, turn it into new strategies, implement and protect them which can affect innovation and company performance," with (M=5.34) and the lowest rating is in the statement "In our organization, everyone speaks up when they have an opinion or an idea to offer" (M=5.12). And judging by the total score of the answers for each dimension, it is known that the highest rating of the respondents is in the Learning Orientation dimension (M=5.34), and the lowest rating of the respondents is in the Knowledge Sharing dimension (M=5.12), but still in the good category as shown in the following recapitulation Table 4 below.

Dimension/Indicator	Average
Learning Orientation	5.34
Knowledge Sharing	5.12

Table 4. Recapitulation Average Rating Scores of Respondents in the Knowledge Management

It can be concluded that the ability to socialize or express opinions/ideas still requires more attention from company management. Each employee works based on their respective roles and responsibilities, where an activity is needed to share as a media update and increase work productivity so that each job can be updated to all relevant sections. Today, the use of knowledge management in banking is critical for a company to survive. One aspect that needs more attention is knowledge transfer through sharing sessions, training, and discussion forums. For example, with knowledge management, companies can utilize the information they have to analyze business strategies needed to increase profits and compete with other companies. In addition, another reason for the many applications of knowledge management in the business sector is that existing knowledge can be used to innovate a product.

c. Analysis of Verificative Test

The verification analysis results are based on the theoretical framework developed to create a conceptual model representing the relationship between enterprise risk management, digital banking transformation, and knowledge management to banning sustainability tested statistically (goodness of fit) with PLS-SEM. The theoretical framework results developed as a conceptual model of the industrial banking sector are presented in the next section.

Measurement Model Testing (Outer Model)

The measurement model (outer model) is assessed for individual convergent validity (based on outer loadings), average variance extracted (AVE), discriminant validity, and composite reliability. The following describes the results of testing the measurement model with Confirmatory factor analysis (CFA) on each research variable. The test results can be seen below:

	Cronbach's Alpha (CA)	rho_A	Composite Reliability (CR)	Average Variance Extracted (AVE)
ERM	0.963	0.964	0.966	0.629
ERM*KM	1.000	1.000	1.000	1.000
KM	0.959	0.963	0.964	0.730
PSB	0.929	0.935	0.939	0.562
TGB	0.941	0.949	0.950	0.681
TGB*KM	1.000	1.000	1.000	1.000

Table 5: Construct Reliability and Validity

Based on the above Table, the Convergent validity is good if the AVE value for each construct is > 0.5 so that the conclusion of all variables is valid. The model is reliable if CR value > 0.7 and CA value > 0.6 and the conclusion all variable is Reliable.

R-Square test

R-squares explain how certain exogenous latent variables affect endogenous latent variables. The R-square value for all endogenous variables of Sustainability Banking is 0.582 (Table 6).

Variable Dependent	R Square
Sustainability Banking **(PSB)**	0.582

Table 6. R-Square test

Prediction relevance (Stone-Geisser's Q²)

In addition to R-Square, structural model testing on the inner model uses predictive-relevance (Q2) values. The Q-square value is above 0 (zero), meaning that the model has a predictive relevance value. Q2 predictive relevance testing with the blindfolding method can be seen in the following table 7:

Variabel Endogen	SSO	SSE	Q² (=1-SSE/SSO)	Conclusion
Sustainability Banking	18168	12411.721	0.317	Predictive Relevance

Table 7. *Prediction relevance (Stone-Geisser's Q²)*

Hypotheses Testing Results

After testing the measurement and structural model, it can be continued for hypothesis testing to answer the research questions. The results are presented in Table 7.

Hypotheses	Relationship	Prediction	Path Coefficient	T Statistics	P Value
1	ERM -> PSB	+	0.497	6.666	0.000*
2	TGB -> PSB	+	0.380	4.584	0.000*
4	ERM*KM -> PSB	+	-0.067	0.910	0.182
6	TGB*KM -> PSB	+	0.098	1.267	0.103
*Significant level 5% R-Square: 0,582					

The first hypothesis concerns how the Enterprise Risk Management affects the Assessment of Sustainability Banking. Table 7 shows that the path coefficient of the Enterprise Risk Management (ERM) on the Assessment of Sustainability Banking (PSB) is 0.497 (t=6.666; p=0.0), indicating that Enterprise Risk Management positively and significantly influences the Assessment of Sustainability Banking in Indonesia. The better the Enterprise Risk Management, the Sustainability Banking Assessment will increase; conversely, if the Enterprise Risk Management is lower, the Sustainability Banking Assessment will decrease. The second hypothesis is related to the effect of Digital Banking Transformation on the Assessment of Sustainability Banking. Table 7 shows that the Digital Banking Transformation (TGB) variable is significantly related to the Assessment of Sustainability Banking (PSB) (b=0.380, t=4.584, and p=0.000). Additional testing knowledge as a moderating variable cannot support the encouragement relationship between enterprise risk management and digital banking transformation.

Discussion

The study results show that enterprise risk management (ERM) positively and significantly influences the assessment of banking sustainability. This means that banking companies have implemented enterprise risk management as an initial strategy in banking sustainability; of course this aligns the sustainability financing strategy with the sustainability financial roadmap as outlined by the financial services authority. Therefore, the core of the sustainability strategy is management awareness in designing the right risk management concept through a process to identify, measure, evaluate, and monitor portfolios and product development plans to estimate threats and losses that will occur in the future so that with the implementation of effective risk management will help mitigate and minimize this. In banking companies, the application of risk management is strengthened by regulatory policies, namely based on the Financial Services Authority Regulation Number 18/POJK.03/2016 concerning the application of risk management in commercial banks. With the increasingly complex risks of banking business activities today, bank management must strive to instill a risk-aware culture to all employees by disseminating and increasing the competence of risk management certification and having an evaluation forum in monitoring an event that has a risk (risk event) through risk self-assessment, which is expected to increase risk awareness in each risk taker unit so that the implementation of bank risk management can run effectively.

A banking control system that uses an approach based on COSO where ERM implementation involves all company components at the BOD, Management, and Employee levels. Risk monitoring is undertaken on the size of the risk appetite to identify an event or potential event that can cause losses and risk exposures that have an impact on assessing bank sustainability, as stated by Teschner et al. (2008), Horcher (2005), McShane (2018). The results of this study support Razak et al. (2019), Pierre et al. (2018), (Beasley and Frigo, 2010), and Pritsch et al. (2008), stating that the implementation of effective and strategic risk management significantly and positively influences the sustainability of a company. This identifies that all banking companies must be able to design an effective risk management strategy for all banking activities, services, and products, to increase their ability to produce performance and comply with policies. One of the banking challenges in Indonesia in the current era is the strength of the application of risk management because Indonesia is currently experiencing a global financial crisis. Banking companies must maintain the quality of their assets and portfolios to avoid failures that can harm the Bank, affecting its sustainability. This study highlights the importance of an ERM framework integrated into short and long-term corporate strategy initiatives. Consistency in evaluating and monitoring is essential, considering no obligations and regulations that integrate strategy and performance into risk management. Theoretically, the results of this study confirm that banking companies that serve the community as an intermediary function focus on further improving the company.

The study reveals that digital banking transformation significantly and positively affects the assessment of sustainability banking. Banking companies have carried out digital transformation stages for corporate sustainability. Banks are the main institutions in the financial sector and must take policy steps so that business operations can run smoothly by preparing to enter the digitalization era; this will impact banking reliability and sustainability and face future challenges. These findings support research by Dootson et al. (2016), Cajetan et al. (2019), Remane et al. (2016), and El Sawy and Pereira (2013), suggesting that companies that use digital technology make it possible to reduce transaction costs and increasing efficiency so that digital banking transformation can improve bank performance and banking sustainability. Theoretically, it can be explained that companies are required to provide fast, safe, and easy services, so this transformation is one of the big hopes for stakeholders, besides that institutionally, there will be a structural shift, especially in information systems and technology, which has an important role in achieving digital transformation, allocation of greater resources for investment in information technology.

In addition, knowledge management has no effect in strengthening the application of enterprise risk management to the assessment of sustainability banking in Indonesia. The phenomenon faced by companies today in carrying out banking activities is required to follow the provisions of regulations so that companies do not have a choice in developing concepts and models according to business needs. Similar results were found for the moderation of digital banking transformation; the results show that it could not strengthen the relationship with the sustainability of banking companies in Indonesia. This indicates that digital transformation does not depend on knowledge management because in carrying out transformations, banks usually go through vendors so that innovations are developed with the help of other parties.

5. CONCLUSION

This study concludes that Enterprise Risk Management positively and significantly affects the Assessment of Sustainability Banking in Indonesia. This proves that the better the Enterprise Risk Management implemented by the Bank, the Sustainability Banking Rating will experience increase, conversely, if the application of Enterprise Risk Management is lower, the Sustainability Banking Assessment will decrease. Thus, Enterprise Risk Management can directly explain the improvement in the assessment of sustainability banking in Indonesia. Digital Banking transformation has a significant relationship with the Assessment of Sustainability Banking in Indonesia. The better the Digital Banking Transformation, the Sustainability Banking Assessment will increase; conversely, if the Digital Banking Transformation gets lower, the Sustainability Banking Assessment will decrease. Thus Digital Banking Transformation can directly explain the improvement in the assessment of sustainability banking in Indonesia. Knowledge management is unable to strengthen the association of the two research variables.

Limitations and Recommendations

The research employed a questionnaire to collect research information that is answered by respondents representing the company so that there may be still subjectivity in giving answers. The number of banking companies included in book 3 and book 4 banks is still relatively small, with the number of banks registered with the Financial Services Authority (OJK) classified in book 2 and book 1, which have not fully carried out digital banking transformation. From a theoretical perspective, this research supports the theory of legitimacy, namely how banking companies in Indonesia take action to maintain sustainability by applying enterprise risk management, a management control package and carrying out digital banking transformation in accordance with the prevailing values and norms, effectiveness will be achieved if the structure in innovative organizations and will ultimately achieve legitimacy status. Institutionally, it is explained that banking company banks are required to adjust to digitalization-based information technology developments; this arrangement can change a bank's business structure and information system in undertaking banking activities. Meanwhile, the sustainability of banking companies is an organizational responsibility to all stakeholders, not limited to the interests of investors or owners, but more broadly, for the benefit of the general public. One strategy that can be carried out to maintain good relations with the company's stakeholders is by making changes and transforming so that they can survive by providing services and products according to the needs of stakeholders. For regulators, input into the implementation of the financial sustainability roadmap for banking companies must be accompanied by a risk assessment of the development of appropriate products and services so that the products and services offered to the public have gone through a proper trial phase process and avoid complaints from users

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