The development of green banking theory

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Abstract
One of the complicated phenomena that has become a topic of discussion in various countries is climate change resulting from various human activities, one of which is business activity. This is the responsibility of all parties, including the economic sector with the banking finance sub-sector, so that the concept of green banking emerges which is a development of the concepts of green finance and green economy. This research aims to look at the development of green banking theory. The research method used in this research is a literature review. The results of the study show that the concept of green banking is seen from various aspects, including factors that influence it, namely environmental interests, stakeholder pressure, policy guidelines, economic factors, and requests for loan facilities. When viewed from consumer perceptions, green banking practices are quite well known by most people, however, there are still people who do not understand the existence of this green banking concept, so banks must contribute to educating customers about the importance of this. On the other hand, sustainability reports and sustainability development reports are also inseparable from this green banking concept, because completeness and consistency of reporting periods are a form of implementing green banking in banking which can increase corporate value. The banking sector, which is one of the main sources of financing for business activities, must consider the business activities it finances to contribute to environmental sustainability. This is in line with the issuance of regulations from the government that support the application of the green banking concept in various countries, including in Indonesia with the existence of POJK no 51/POJK.03/2017 concerning the application of the green banking concept carried out by banks in Indonesia with the aim of avoiding financing. For businesses that have the potential to damage the environment, society, and governance, this is related to the policy of providing banking credit facilities which requires an Environmental Impact Assessment.

Keywords: Green banking, Green banking theory, Green economics, Green finance

INTRODUCTION
Climate change, which is primarily caused by human activities, means a significant and long-term change in the earth’s average weather pattern. Climate change is a complex phenomenon that is worrying and has become a focus of society throughout the world (Bhardwaj & Malhotra, 2013; Markonah & Wahyuningsih, 2020; Meena, 2013; Setiawan et al., 2021; Tamala et al., 2022). The cause of climate change includes arbitrary Resource consumption patterns it and will have an impact on future generations (Sahoo et al., 2016). This climate change has an impact on health, the economy, and the environment (Bhardwaj & Malhotra, 2013). Many countries are committed to mitigating climate change (Bhardwaj & Malhotra, 2013; Meena, 2013), therefore, various kinds of mitigation are needed to control the impact of climate change, the World Bank estimates that the cost of mitigation in developing countries alone ranges from US$ 140 billion to US$ 175 billion per year until 2030 (Bhardwaj & Malhotra, 2013). Various activities can be carried out to preserve the environment, including campaigning and going green (Hakim et al., 2023).

The term go green is very popular today. Going green or greening is defined as an act of saving the earth as a result of global warming which has begun to suffer damage. The definition is according to the statements of many experts (Markonah & Wahyuningsih, 2020; Yunus & Mitrohardjono, 2019). “Go green” action is a social movement to preserve the environment to minimize environmental
damage (Tamala et al., 2022). “Go green” can support the sustainable development (Mumbaasithoh et al., 2022) because it is relevant to every aspect of the business (Ahuja, 2015).

The economic sector is one of the sectors that is concerned in this field, as well as the principle of circular economy to manage the economy in a sustainable manner which was recognized in 1966 by Boulding (Cesari & Jarrett, 1967), then the concept was developed by D.W. Pearce, R.K. Turner in 1989 (Ge & Zhi, 2016; Pearce & Turner, 1990). This circular economy has the 3R principles, namely reduction, reuse, and recycle (Santeramo, 2022). This concept explains that economic actors act from a life cycle perspective by minimizing input and waste and increasing synergy between sectors with the aim of having a good impact on the environment (D’Amato et al., 2017).

Furthermore, the concept of a green economy became known after the UN conference in Rio De Jenario in 2012 (Santeramo, 2022). Green economy aims at human well-being and social equity and significantly reduces environmental risk and ecological scarcity (D’Amato et al., 2017; Wijayanti & Ramlah, 2022). A green economy is a concept that basically urges that every economic activity is obliged to minimize the impact on the environment (Anggraini & Iqbal, 2022). This green economy principle must be in line with future sustainable priorities and policies (Oktiani, 2012). Some of the development concepts of the Green economy, namely green jobs, green financing and investment, green tourism, and green growth (Firmansyah, 2022) with 6 main topics namely (1) Sustainable development; (2) Green investment in urban areas; (3) Tourism, business, education and human resources; (4) Renewable energy production; (5) 3R (Recycle, Reduce, Reuse); (6) Conservation (Wijayanti & Ramlah, 2022).

Although the financial and banking sub-sectors do not contribute directly to environmental pollution, compared to other sectors such as the mining and manufacturing sectors, banks feel they have a stake in protecting the environment (Anggraini & Iqbal, 2022). The banking sub-sector is a sub-sector that participates in supporting the community’s economy, in accordance with its function as an intermediary institution, namely collecting funds from the public in the form of savings and channeling them back to the community in the form of loans (Kartika et al., 2022). Even though the banking sub-sector has so far been considered an environmentally friendly sub-sector from an internal operational standpoint, the external impact on the environment through their debtors’ business activities is enormous, this is because banking is one of the main sources of financing for industrial/manufacturing projects, for example cement, steel, hard, chemicals, fertilizers, textiles and others that cause maximum carbon emissions (Bhardwaj & Malhotra, 2013; Khamilia & Nor, 2022; Miah et al., 2021). Therefore, the banking sector can play an intermediary role between economic development and environmental protection, to promote socially responsible and sustainable investment (Bhardwaj & Malhotra, 2013).

Thus, it is clear that the financial and banking sectors are also responsible for protecting the environment, because environmental sustainability is a shared responsibility (Anggraini et al., 2020; Anggraini & Iqbal, 2022). One of the things banks can do is implement environmentally friendly practices in their operational activities or what we have come to know as green banking (Anggraini & Iqbal, 2022). Green banking is a relatively new concept in finance (Bihari & Pandey, 2015). Green banking is a modern concept of the banking business by considering corporate social responsibility (CSR) and environmental issues (Islam & Das, 2013). This green banking concept will be very beneficial for various parties, namely banking, industry and the economy (Bhardwaj & Malhotra, 2013). In this green banking concept, the banking sector no longer only focuses on financial responsibility but also on environmental preservation and social welfare (Dewi & Dewi, 2017; Rachman & Saudi, 2021). For banking itself, the green concept is financial products and services that consider environmental factors during transaction decision making for loans, post-loan monitoring, risk management, promotions related to environmentally responsible investments and stimulating low-carbon technology, projects, industry and business (Rapi et al., 2023). Green banking is different from conventional banking (Sahoo et al., 2016). Green banking chooses to support by providing financing for environmentally friendly companies (Bhardwaj & Malhotra, 2013).

Banks that have implemented green banking principles make more use of technological
advances and the internet which is now growing rapidly so that banking activities that were previously based on paper have become paperless, thus, it is expected to reduce carbon footprints and carbon emissions (Anggraini et al., 2020). Green banking is closely related to sustainability, which is the main objective carried out with various efforts to protect the environment and invest in the social environment (Lalon, 2015). Some of the advantages of implementing green banking are paperless, creating environmental awareness for business people, loans for environmentally friendly business activities, and setting environmental standards for prospective debtors (Meena, 2013).

Closely related to green finance, green finance is a relatively new field of finance (Cai & Guo, 2021). Green finance is a pattern of integrating environmental conservation and protection with economic benefits (Cai & Guo, 2021). Green finance is also defined as any structured financial activity created to ensure a better environmental impact (Rapi et al., 2023). Based on this, green financing relates to financial distribution in the form of loans that have green or environmentally friendly elements in the transaction process, several aspects of green finance, namely green credit, green insurance, green securities, carbon finance, and the establishment of a green financial system (Cai & Guo, 2021; Firmansyah, 2022). This green finance instrument was adopted more quickly by the private sector than the public sector with banks having a major role in providing financing or loans (Ahuja, 2015; Liu & Wu, 2023). Green finance is part of green banking which has a major contribution to the transition to resource-efficient and low-carbon industries, namely green industry and green economy in general (Meena, 2013).

Banking involves several stages. Jeucken and Bouma in Sahoo et al. (2016) explained the four stages of banking, namely defensive banking, preventive banking, offensive banking, and, lastly, sustainable banking, which means the bank seeks the highest sustainable rate of return, not the highest rate of financial return. Thus this is related to the importance of disclosing a sustainability (Liu & Wu, 2023). The increasing push from the international community is forcing the Indonesian government to play an active role in environmental issues (Dewi & Dewi, 2017).

The concept of sustainable development (sustainable development goals) contains the idea that the state is obliged to improve the welfare of its citizens through a comprehensive strategy, including improving health and education, eliminating practices that can give rise to disparities or inequality, and increasing the economic growth of society while still considering climate change problem (Khamilia & Nor, 2022). The government has emphasized the role of banks in environmental and social issues in POJK Number 51/POJK.03/2017 concerning the implementation of sustainable finance for financial service institutions, issuers, and public companies. The banking industry itself has had a long time to prepare to implement green banking or sustainable finance in its companies (Khamilia & Nor, 2022). The sustainability report is a report on the impact of company activities. A report can be said to be sustainable if the performance it reports for a certain period of time is sustainable, the company must prepare a sustainability report because a sustainability report is a continuous company performance report to manage the company’s influence on sustainable development (Hapsari, 2023). However, since the issuance of POJK Number 51/POJK.03/2017, to the year 2019, a significant increase was only seen in 2019 with a total disclosure of 55.81% from 45 banks, which was dominated by banks in the BUKU 3, BUKU 4 and foreign bank categories (Khamilia & Nor, 2022). There are still many banks that have not implemented this green banking concept (Bhardwaj & Malhotra, 2013). The importance of green banking disclosure will certainly increase the value of the company (Khan et al., 2021).

METHODS

The method used in this research is a descriptive method with a literature review approach. The literature review method is a method of collecting library data, reading, recording, and processing written materials. Sources of data obtained were book journals, collections of published articles, published research institutions, and internet pages. From various articles, researchers select articles that are closely related to the keywords used. In the next step, researchers grouped articles related to the implementation of green banking to then be studied according to the aim of this research, namely knowing the development of green banking theory (Mumbaasithoh et al., 2022; Tamala et al., 2022).
RESULTS AND DISCUSSION

The banking sector is a sector that can carry out various roles, including economic development, protecting the environment, and promoting environmentally friendly and socially responsible activities, which is then called green banking (Meena, 2013). Many human activities ultimately exploit the environment which then disrupts the ecological balance (Yadav & Pathak, 2013). Banking activities are not directly related to the environment, but the external impact of related customer activities is large (Ganesan & Bhuvaneswari, 2016). Green banking is about making the world a better place by reducing and repairing existing damage (Arumugam & Chirute, 2018).

Many factors influence the implementation of green banking, one of which is in Malaysia, namely environmental interests, stakeholder preferences, policy guidelines, economic factors, and demand for loan facilities (Arumugam & Chirute, 2018). Other research suggests that there are several factors that influence the adoption of green banking in Malaysia, namely top management pressure because top management is the most powerful and influential group of executives who have responsibility for the entire organization, therefore, the adoption of green banking requires top management commitment, next is pressure. Customers, customers are the main stakeholders in the adoption of green banking, next is competitive pressure because competitors have a big interest, are felt to threaten, influence, and have cooperative capabilities towards the adoption of green banking, the last is community pressure, the community as a stakeholder has direct influence as well as indirectly to company performance, one of the reasons for adopting green banking is to improve and maintain good relations with the community (Bukhari et al., 2019).

Green banking means promoting environmentally friendly practices and reducing the carbon footprint of various banking activities, although the green banking concept is quite well known by many customers regarding online banking facilities. There are still many customers who do not know that there are still many banking service products that are environmentally friendly, such as debit and credit cards that can be recycled, automatic cash or check deposits, environmentally based loan percentages, and so on. Banks must take action to educate customers about this. It is the responsibility of banks to protect the environment, as financial intermediaries and channels for future economic growth (Ganesan & Bhuvaneswari, 2016). Customer understanding is needed regarding the factors that influence the implementation of green banking practices, one of which is customer satisfaction, namely the comparison between expectations and the reality of the experience felt. To know customer expectations, banks must really know the customer’s needs and desires. Banking is required to identify the factors that affect customer expectations. Customers expect their banks & financial institutions will use green technology banks adopt green technology for energy efficiency & resource utilization (Rai et al., 2019). In reality, the digital transformation already refers to the concept of green banking which has the aim of reducing sustainable impacts and ensuring the use of environmentally friendly resources (Almi, 2023).

Several studies have been conducted regarding green banking with sustainability reports (Bose et al., 2018; Hoque et al., 2022; Hossain et al., 2016; Khamilia & Nor, 2022; Khan et al., 2021), Sustainability is a crucial issue (Hoque et al., 2022), this is related to the sustainability report which is a description of the company’s responsibility to stakeholders and the application of sustainability reports to companies that increase company value, this transparency will have an impact on increasing investor confidence so that investment interest increases (Hapsari, 2023). The completeness of this sustainability report will certainly provide important information, incomplete sustainability reports can cause information asymmetry among stakeholders regarding sustainability activities carried out by the company, thus, sustainability reports should be reported consistently and continuously for a certain period so that information is obtained to make decisions (Hapsari, 2023). In other countries, for example in Bangladesh, one of the main problems is that there are no green banking reporting guidelines. Green banking was introduced in Bangladesh in 2011, at that time banks started to report their green banking activities, since then reporting has increased quite a bit but it is felt to be less consistent due to issues related to reporting standards based on reporting guidelines (Hossain et al., 2016), and it turns out that it is true that other research in Bangladesh revealed that the issuance of
green banking regulations had a significant positive influence on green banking reporting (Bose et al., 2018). Banks tend to provide more information related to their sustainability in annual reports, and other research that discusses the success of green banking disclosure will improve financial performance (Hoque et al., 2022). This green banking disclosure also has a positive impact on the overall company value (Khan et al., 2021). In Indonesia itself based on research results (Khamilia & Nor, 2022), sustainability committees have been proven to have a significant positive influence on green banking disclosure, there are differences in green banking disclosure before and after the issuance of government regulations through the Financial Services Authority (OJK) POJK Number 51/POJK.03/2017 while other variables, namely Operational Costs in Revenue Operations, Capital Adequacy Ratio, Financial Slack, Human Resource Slack, and Sustainability Officer were found not to have a significant influence on green banking disclosure in banking sub-sector sample companies listed on the Indonesia Stock Exchange (BEI) for the 2016-2019 period (Khamilia & Nor, 2022).

Several studies have been conducted regarding green banking which is associated with the sustainability development (Ahuja, 2015; Hapsari, 2023; Meena, 2013; Mir & Bhat, 2022; Paluszak & Paluszak, 2016; Yadav & Pathak, 2013). Currently, various sectors have the same responsibility in helping to overcome global warming, all activities including business must have a positive impact on the environment, especially banking which is one of the main sources of short-term and long-term financing for companies engaged in various fields and considering the impact of the company’s activities on the environment in the provision of credit facilities, this has a big impact. A concrete example is that banks can avoid financing credit facilities for companies that produce carbon because they have a big risk for the future of the environment and start supporting innovative technological solutions that absorb or reduce carbon emissions, this is what is called sustainable development which does not only benefit the banking sector but also industry and the environment in general (Mir & Bhat, 2022). This green banking ensures environmentally friendly practices in the banking sector by reducing internal and external carbon and providing loans with environmentally friendly principles, the implementation of green banking still has a lack of consumer awareness (Ahuja, 2015). Green banking tends to be something new for developing countries like India. This research found that public banks have initiated more green banking compared to private banks (Yadav & Pathak, 2013). Some steps in green banking include: 1) Go online which includes paying bills online, remote deposits, online fund transfers, and filling out statement letters online. This of course reduces the amount of paper usage, and energy, and less expenditure of natural resources from customer activities. 2) Eco-Friendly Current Account 3) Eco-friendly loans for home improvements 4) India Green Building Council (IGBC) offers several financial benefits 5) Electricity saving appliances 6) Eco-friendly credit cards 7) Save paper as well as 8) Use of mobile banking.

Regarding green banking policies, other countries such as Bangladesh have issued policies so that all banks in Bangladesh participate in implementing green banking by making environmentally friendly policies (Ganesan & Bhuvaneswari, 2016). The Bangladesh government is obliged to formulate and adopt green banking based on approval from the Board of Directors. Banks have to approve a sizable amount of funding in their annual budget for the implementation of green banking (Lalon, 2015). Likewise, the implementation of green banking in India is still a relatively new (Ganesan & Bhuvaneswari, 2016). In Bank Indonesia Response (2014) Law number 23 of 2009 concerning environmental protection and management. This regulation relates to economic activities that must be balanced with efforts to protect the environment from the impacts that arise as a result of these activities. The regulation that emerged was Bank Indonesia Regulation No 14/15/2012 regarding the assessment of the quality of commercial bank assets, in this regulation it is explained that Bank Indonesia emphasizes banks in Indonesia consider environmental feasibility factors in evaluating a business (Anggraini et al., 2020). In addition to Bank Indonesia, the Financial Services Authority issued its regulations through POJK no 51/POJK.03/2017 concerning the implementation of sustainable finance for financial service institutions, issuers, and public companies by the OJK requiring the entire Financial Services Sector to apply sustainable finance principles by submitting an Action Plan Sustainable Finance (RAKB) and Sustainability Report submitted to OJK and the public.
Chapter 7 paragraph (1) of the POJK, there are three priorities for implementing Sustainable Finance, namely developing financial services products, increasing the capacity of Financial Services Institutions (LJK) and adjusting financial service institutions so that they are in line with the principles of implementing Sustainable Finance, Amendment to PBI Number 14/15/PBI of 2012 concerning Asset Quality Assessment for Commercial Banks to become POJK Number 51/POJK.03 of 2017 is certain to have a juridical impact on banking Financial Services Institutions and non-banking Financial Services Institutions, namely requiring sustainable finance in their business activities. Financial products and services offered by banking financial institutions must integrate economic, social, and environmental aspects following Chapter 1 paragraph 11 of this regulation (Asfahaliza & Anggraeni, 2022; Naiborhu, 2023). Chapter 1 paragraph 8 explains that the meaning of sustainable finance is comprehensive support from the service sector to create sustainable economic growth by adjusting economic, social, and environmental interests. Reinforced in Article 2 paragraph 2 that the Implementation of Sustainable Finance is carried out using principles (Almi, 2023; Naiborhu, 2023):

1. Responsible investment
2. Sustainable business strategies and practices
3. Management of social and environmental risks
4. Governance
5. Informative communication
6. Inclusive
7. Development of priority leading sectors
8. Coordination and collaboration

In the implementation of POJK no 51/POJK.03/2017 concerning the application of the green banking concept implemented by banks in Indonesia, the aim is to avoid financing for businesses that have the potential to damage the environment, social and governance, this is related to the policy of providing banking credit facilities that require an Environmental Impact Assessment (Almi, 2023; Naiborhu, 2023). In fact, in Indonesia itself, the green economy concept has been included in the 2020-2024 RPJMN which has three priority programs, the first of which is improving environmental quality, disaster resilience climate change, and low-carbon development (Almi, 2023).

CONCLUSION

Based on the results of research that has been carried out, green banking is seen from various aspects, including influencing factors, namely environmental interests, stakeholder preferences, policy guidelines, economic factors, and demand for loan facilities. Even though the practice of green banking is well known to most of the public, there are still people who do not understand the concept of green banking, so banks must contribute to educating customers about the importance of it. Apart from the importance of consumer perception, in the green banking concept, there is the term sustainability report which is a description of the company's responsibility to increase the value of the company presented, the completeness and consistency of the sustainability reporting period are very important so that the information can be fully received by the public. Environmental sustainability is a shared responsibility, as well as for banking which is one of the sectors that has the same responsibility in overcoming global warming, banking is one of the main sources of financing for business actors, both short and long term, and banks must consider the impact of the company's business activities. This is in line with the issuance of regulations from the government that support the application of the green banking concept in various countries, including in Indonesia with the existence of POJK no 51/POJK.03/2017 concerning the application of the green banking concept carried out by banks in Indonesia to avoid financing for businesses that have the potential to damage the environment, social and governance, this is related to the policy of providing banking credit facilities which require an Environmental Impact Assessment.
Limitations and Future Direction
This article describes the development of green banking from several perspectives, namely policies, determinants, consumer perception, disclosure of sustainability reports, and Sustainability Development.

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Declarations
The author states that this article is an original work that has been submitted to the Interdisciplinary International Journal of Culture and Conservation (IIJCC). The article has not been published and is not being submitted or being considered for publication elsewhere.

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