

CHAPTER 5

CONCLUSION

5.1 Research Conclusion

Based on the research findings, panel data analysis, and discussion presented in the previous chapter regarding the effects of the Green Credit Ratio and Energy Disclosure on Firm Value (Tobin's Q) with the KBMI as a moderating variable in the banking sector listed on the Indonesia Stock Exchange (IDX) from 2020 to 2024, using a dataset of 210 and 42 companies, the following conclusions are drawn in accordance with the research questions:

1. The Green Credit Ratio has a negative but insignificant effect on Firm Value (Tobin's Q). This indicates that the proportion of green credit disbursed by banking institutions in Indonesia has not yet become a key determinant that investors respond to aggressively or that directly drives a company's market valuation in the short term. Green credit is still perceived by the market merely as a means of fulfilling formal regulatory obligations (compliance).
2. Energy Disclosure has a negative but insignificant effect on Firm Value (Tobin's Q). These results indicate that the comprehensiveness of disclosures regarding energy consumption and efficiency in banking sustainability reports has not yet been fully recognized as positive by capital market participants. Investors in Indonesia still tend to view standalone energy disclosures as an additional operational cost (burden cost) that can erode bank profitability.
3. KBMI was unable to moderate the relationship between the Green Credit Ratio and Firm Value (Tobin's Q), with a positive and insignificant interaction. This finding implies that the impact of the green credit portfolio on changes in a bank's market value is neutral and

is not differentiated by the bank's core capital scale. Since sustainable finance regulations apply equally to all national banking clusters, the market evaluates them as equivalent legal compliance standards regardless of a bank's capital level.

4. KBMI was found to significantly moderate the relationship between energy disclosure and firm value (Tobin's Q) in a positive direction. This finding confirms that the reliability of energy disclosure signals in sustainability reports is highly dependent on a bank's capital capacity. Based on the Resource-Based View, banks in the high KBMI group are assessed to have an abundance of financial slack to translate energy reporting into credible operational transformation actions, which are then responded to very positively by investors through an increase in firm value.

5.2 Research Limitation

Although all stages of the analysis were conducted with great care and in accordance with rigorous scientific standards, this study was not without certain obstacles and limitations. Recognizing that no academic work is truly perfect, the technical and theoretical limitations encountered throughout this research process are intended to serve as important notes and areas for improvement in future studies.

1. Limitations of the Observation Period

The time horizon used in this study is relatively limited, covering only a five-year period from 2020 to 2024. This short observation period may not yet be sufficient to fully capture the long-term impacts of the sustainable finance transition, given that green investment policies such as Green Credit typically require a long operational adjustment period (long gestation period) before they can ultimately translate into stable economic value in the capital markets.

2. Limitations of Research Variables

This study focuses solely on the Green Credit Ratio and Energy Disclosure as proxies for sustainable finance activities, and the Tobin's Q ratio as the sole indicator of firm value. In reality, there are still many other dimensions of sustainability not accommodated in this model, such as the disclosure of net carbon emissions, the issuance of green bonds, banking social performance, or traditional accounting-based proxies of firm value (such as ROA or ROE) that may be responded to differently by market participants.

3. The Element of Subjectivity in Content Analysis

Measurements of the Energy Disclosure variable rely heavily on content analysis of sustainability reports and annual banking reports. Although the assessment instrument was designed to be as objective as possible by referring to standard benchmarks, the dichotomous scoring process (scores of 0 and 1) cannot be entirely free from the researcher's subjective bias when interpreting the depth of meaning and context of energy disclosure statements presented by bank management.

5.3 Research Implication

The findings presented earlier go beyond mere statistics; they convey a series of profound strategic messages for the development of a sustainable financial ecosystem in Indonesia. The varied responses to the four hypotheses provide a new perspective that bridges the gap between academic theory on paper and the pragmatic reality on the trading floor. Therefore, the implications of this research can be formulated into two main dimensions: theoretical implications for the advancement of knowledge and practical implications for decision-makers:

1. Theoretical Implication

- Strengthening the Resource-Based View (RBV) Framework

This study makes a strong theoretical contribution to the expansion of RBV theory in the context of sustainable finance. The successful testing of Hypothesis 4 academically demonstrates that the disclosure of non-financial information, such as Energy Disclosure, cannot stand alone to create a competitive advantage; rather, it must interact with tangible internal resources, namely a bank's capital capacity (KBMI). Strong capital acts as a strategic asset that validates the authenticity of a company's green transition efforts in the eyes of the market.

- Differentiated Application of Signaling Theory in Emerging Capital Markets

The findings of this study offer a new perspective on Signaling Theory by demonstrating that emerging capital markets, such as Indonesia's, are highly selective and skeptical toward environmental signals. Signals in the form of Green Credit allocation (H1) and Energy Disclosure (H2) are partially viewed as neutral by the market because they are considered mere compliance with regulatory obligations. Signaling Theory has proven to work effectively only when the signals are costly and supported by sufficient financial capacity to execute them.

2. Practical Implication

- For Bank Management

For hypothesis 1 (Insignificant Green Credit) bank management needs to realize that merely disbursing green financing to meet regulatory targets will not immediately boost stock prices in the short term. Therefore, banks are not advised to force a radical expansion of green credit if their risk mitigation infrastructure is not yet prepared, considering that high green transaction costs can actually erode operating profits.

For hypothesis 2 (Insignificant/Negative Energy Disclosure) banks must be highly prudent in allocating budgets for extensive sustainability

reporting. If the disclosure of energy efficiency in the report is not accompanied by tangible evidence of operational cost savings, management risks sending a negative signal to the market, which may perceive the report as an administrative burden cost.

For hypothesis 3 (Insignificant Interaction between Green Credit and KBMI) management of large-scale banks (KBMI 3 and 4) must not be complacent with the assumption that their capital abundance will make investors tolerate the risks of green portfolios. Prioritizing capital expenditure toward information technology and digital banking is currently deemed more rational; however, management must still improve communication strategies with shareholders so that green credit disbursement is not merely viewed as an act of regulatory compliance.

For hypothesis 4 (Significant Positive Interaction between Energy Disclosure and KBMI) this serves as an essential guide for differentiating bank strategies based on capital size. For high-KBMI banks, management must optimize their capital abundance to build a solid and transparent Energy Accounting System, as transparency from large banks is proven to be rewarded with a high valuation premium by the market. Conversely, for low-KBMI banks, management should refrain from overly ambitious ESG reporting practices (to avoid greenwashing sentiments) and prioritize internal physical utility cost efficiency first.

- For Regulators (Financial Services Authority and Bank Indonesia)

For hypothesis 1 (Insignificant Green Credit) OJK and Bank Indonesia need to evaluate the effectiveness of POJK No. 51/POJK.03/2017. The lack of significant market appreciation for green credit indicates the need for regulators to formulate concrete incentive policies, such as loosening the Risk-Weighted Assets (RWA) weighting for green financing or subsidizing environmental certification costs. This would allow banks to absorb initial costs without fear of depressing their firm value.

For hypothesis 2 (Insignificant Energy Disclosure) regulators need to provide a more standardized yet cost-efficient reporting and disclosure framework. Overly complex reporting obligations potentially burden banks and are viewed negatively by the market; thus, phased disclosure guidelines tailored to the readiness of domestic banking infrastructure are required.

For hypothesis 3 (Insignificant Interaction between Green Credit and KBMI) because the market views green financing disbursement as a uniform compliance standard across all bank tiers, regulators need to create policies that encourage the formation of "Green Syndications." OJK could assign a specific mandate to KBMI 4 banks to act as lead arrangers in massive national-scale green projects to disperse technical risks while creating differentiated value added that the capital market can appreciate.

For hypothesis 4 (Significant Positive Interaction between Energy Disclosure and KBMI) regulators are advised not to apply sustainability disclosure obligations using a one-size-fits-all approach. Since the market only responds positively to energy disclosures from strongly capitalized banks, OJK should provide reporting compliance relaxations or incentives for KBMI 1 and 2 banks so that they are not burdened operationally and in terms of market valuation.

- For Investors and Capital Market Participants

For hypotheses 1 and 3 (Insignificant Green Credit and its interaction with KBMI) investors in the Indonesia Stock Exchange are advised to remain pragmatic and not overreact to announcements of green credit portfolio expansions by banks, regardless of the bank's capital size. Investors must analyze the fundamentals first, as sustainability projects inherently have a long gestation period.

For hypothesis 2 (Insignificant Energy Disclosure) market participants must be more critical when reading sustainability reports. Given the tendency toward a negative relationship, investors must be able to filter out which banks

are merely engaging in greenwashing (purely cosmetic reporting that wastes costs) and which banks are fundamentally achieving real energy savings.

For hypothesis 4 (Significant Positive Interaction between Energy Disclosure and KBMI) investors gain a highly solid new investment metric. When investing in Environmental, Social, and Governance (ESG) based banking stocks, investors are strongly advised to use a conjoint (paired) approach. A high valuation premium and stock accumulation decisions are highly secure when the energy efficiency and transparency signals are issued by banking institutions with a robust capital structure (high KBMI), as the sustainability signals from this group of banks are backed by the most credible execution capacity.

5.4 Research Recommendation

Given the limitations outlined above, this study opens up significant opportunities for future academic research. To ensure that research on sustainable finance in Indonesia proceeds in a more comprehensive manner, the following strategic recommendations are offered for future researchers:

1. Extending the Observation Period (Time Horizon)

Researchers are advised to extend the observation period, for example, to 7 to 10 years. A longer time horizon will be very helpful in validating whether the lack of a significant effect of the Green Credit Ratio on firm value is purely because the market is not yet sensitive, or because such green investments indeed require a much longer lag time to consistently influence positive investor perceptions in the capital market.

2. Expanding Proxies and Sustainability Variables

To provide a more comprehensive picture of the banking sector's green commitments, future research could add or replace independent variables with other sustainable financial proxies that are now emerging in Indonesia, such as the volume of green bond issuances, the proportion of green revenue,

specific carbon emissions disclosures, and social-based financing. Additionally, corporate value indicators could be combined by using market value (Tobin's Q) alongside traditional accounting profitability proxies such as Return on Assets (ROA) or Return on Equity (ROE) to examine whether there are differences in response between the internal and external performance of the banking sector.

3. Transforming the Conceptual Framework into a Mediation Model

Given that the impact of green credit policies (Green Credit Ratio) on external market value (Tobin's Q) often does not occur immediately, future research is advised to shift from linear or moderation models to a pure mediation model. Researchers can include accounting-based internal financial performance metrics (such as ROA, ROE, or Net Interest Margin) as mediating variables to examine whether green credit must first improve operational profitability before ultimately receiving a positive response from the capital markets.

4. Including Pure Corporate Governance Variables as Alternative Moderators

Further research is recommended to replace or supplement the Bank Group Based on Core Capital (KBMI) variable with specific internal banking governance characteristics, such as board size, board independence, or the existence of a dedicated environmental committee. This is important because transparency and the implementation of green banking policies in Indonesia have proven to be highly sensitive to the structure of corporate oversight within the company.