Green Banking as a Strategic Sustainability Initiative : An Empirical Analysis

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Abstract: *The banking sector is at a starting point of developing sustainable development by channeling capital towards environmentally friendly investments. Banks are increasingly turning into agents of low-carbon economic change through green financing instruments, i.e. renewable energy loans, climate-resilient infrastructure financing, sustainable agriculture credit, and green bonds. The paper is an empirical examination of the structural determinants and institutional effect of green banking initiatives on panel-based data that consists of 25 bank-years of data between 2019 and 2023. The multi-method analytical framework was embraced, which incorporated descriptive statistics, multiple regression analysis, Principal Component Analysis (PCA), and Structural Equation Modeling (SEM) in evaluating the intensity of sustainability integration in banking institutions.*

Regression outcome illustrates that the size of total loan portfolio, bank ownership structure and changes over time are marked predictors of green finance allocation, as the equation accounts for 82% of the variability (R 2 = .82 p, 0.001). The provision of larger banks and those equipped with institutional support is more allocation to green assets, which implies scale effects and the impact of governance on adopting sustainable finance. PCA is used to determine a significant sustainability financing construct that explains 62.4 percent of the total variation meaning that there is a great internal consistency in the indicators of green lending.

SEM analysis also confirms the structural routes of integration of sustainability. Another direct effect of sustainability financing on environmental impact (=.84, p <.001) and indirectly through institutional commitment (=.36, p =.021). The indices of model fit assure the adequacy (CFI = .95; RMSEA =.048) of the structural model.

Together, the results show that green banking has grown to have an exterior involvement in corporate social responsibility (CSR) to a more integral financial concept. The policy implications point to the significance of regulatory levels, ESG-based performance payments, disclosure requirements, and green bond market growth to U.S. climate-oriented financial change acceleration..

Keywords: Green Banking, Sustainability, Funding, infrastructure, Banking Sector