BANK-BASED CLIMATE CHANGE INITIATIVES, SUSTAINABILITY CHARACTERISTICS, AND PERFORMANCE: THE ROLE OF CORPORATE GOVERNANCE

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Abstract

The impact of climate change on bank performance has attracted growing interest from academics, practitioners, regulators, and policymakers in recent years. However, studies in this area of research are scarce and lack clear conclusions. Furthermore, these studies have not clarified whether governance structure plays a role in mitigating the effects of climate risks on financial performance. Therefore, this study seeks to shed light on the role of corporate governance characteristics in moderating the link between climate change and bank performance. Furthermore, the study examines the effect of bank climate change initiatives and bank sustainability characteristics on bank performance by analyzing a significant sample of European Union (EU) banks over the period from 2007 to 2023. Initial findings highlight that the impact of climate change initiatives on bank performance is moderated by good corporate governance practices and thus supports a new paradigm for bank performance strategies.

1. INTRODUCTION

In recent decades, climate change has increasingly attracted the interest of academics, practitioners, regulators, and policymakers. This interest has become particularly important for banks, especially after the global financial crisis of 2007/2008, as banks' long-term decisions are usually influenced by growing economic challenges, such as climate change. The impact on banking profitability, both in the short term and long term, of climate change is mainly due to the deterioration of corporate and household balance sheets through damage to the repayment capacity of debtors, increasing the probability of insolvency, lowering the quality of credit and therefore affecting its performance in terms of profitability (Lee et al. 2024). The literature on the financial impact of climate change risks is recent but growing (Boungou & Urom, 2023; Lin & Wu, 2023). Furthermore, banks are under enormous pressure from stakeholders to promptly respond to climate change by engaging in initiatives to reduce their greenhouse gas emissions. To meet these needs, banks are committed on the one hand to implementing initiatives against climate risk and on the other hand to reviewing their governance structure. Therefore, recent research has focused on analyzing the effect of corporate governance on the relationship between climate change initiatives and banking performance but has produced mixed results (Adu et al. 2024).

2. METHODOLOGY AND SAMPLE

A fixed effects (FE) regression model was estimated to account for potential omitted variables and unobserved bank-specific heterogeneity. The Hausman test was performed, which suggests that an FE model is appropriate for the type of unbalanced panel data set. The equations used for the empirical analysis are as follows:

$$P_{it} = \alpha_0 + \beta_1 CC_{it} + \beta_2 CON_{it} + \beta_3 GDP_t + \beta_5 INF_t + \varepsilon_t \quad (1)$$

$$P_{it} = \alpha_0 + \beta_1 CC_{it} + \beta_2 CON_{it} * CG_{it} + \beta_3 CG_{it} + \beta_4 GDP_t + \beta_5 INF_t + \varepsilon_t \quad (2)$$

$$P_{it} = \alpha_0 + \beta_1 BS_{it} + \beta_2 CON_{it} + \beta_3 GDP_t + \beta_5 INF_t + \varepsilon_t \quad (3)$$

$$P_{it} = \alpha_0 + \beta_1 BS_{it} + \beta_2 CON_{it} * CG_{it} + \beta_3 CG_{it} + \beta_4 GDP_t + \beta_5 INF_t + \varepsilon_t \quad (4)$$

where the dependent variable is the financial performance of the i-th bank at time t (P_{it}), the independent variable CC_{it}, presented in eq. (1) and eq. (2), denotes the variable of bank-based climate change initiatives,

BS_{it}, presented in eq. (3) and eq. (4), is the variable of bank sustainability characteristics. The CC_{it} variable includes bank climate initiatives variable (CI_{it}) which is expressed by an index calculated considering specific items of initiatives and calculated in percentage terms (the minimum is 0% concerning no initiatives and the maximum is 100% in the case of the full instituted bank climate initiatives) and bank investment in climate change initiatives variable (CCI_{it}) which is the natural logarithm of the amount spent in executing climate change initiatives. The BS_{it} variable includes sustainability reporting variable (SR_{it}), which is a dummy variable that is equal to 1 if the bank has sustainable reporting otherwise zero, and the sustainability committee variable (SC_{it}), which is a dummy variable that is equal to 1 if the bank has a sustainability committee otherwise zero. The corporate governance variable (CG_{it}), included in eq. (2) and eq. (4), allow us to understand whether it played a role in mitigating the effects of the previously mentioned independent variables on bank performance. The CG_{it} variable includes board size (BSI_{it}), board independent (BI_{it}), and board gender (BG_{it}). Several independent control bank-level variables (CON_{it}) are being considered: leverage (LEV_{it}), capitalization (CAP_{it}), and Tier1 ratio ($T1_{it}$). In addition, macroeconomic variables have included the gross domestic product per capita at time t (GDP_t) and inflation rate at time t (INF_t). The financial performance variables are the return on assets (ROA_{it}) and the return on equity (ROE_{it}). The coefficients of the independent variables and the regression constant are estimated as parameters β and α, respectively. Additionally, the error term (ε_t) represents other variables that may potentially affect the P_{it} variable but are not included in these equations. Data for independent variables, including governance variables, are taken from annual reports. The control variables at the bank level are taken from the Bankfocus database. The data for macroeconomic variables are extracted from the World Bank database. The analysis sample consists of bank holding companies of 27 EU countries with total assets exceeding 10 million euros over the period from 2007 to 2023. The final sample consists of 117 bank holding companies for 22 years, consequently, the observations are equal to 2574.

3. DISCUSSION AND CONCLUSION

Initial findings highlight that the impact of climate change initiatives on bank performance is moderated by good corporate governance practices. These first results will have to be developed and then verified by applying robustness tests and alternative comparison variables. This research has several limitations that need to be considered for the correct interpretation of the results. First, the study only focuses on the 27 EU areas and may not be generalizable to other regions or countries for

which they could influence macroeconomic variables not considered in the analysis. Additionally, the research only considers some variables that concern climate change initiatives and bank sustainability characteristics. The strength of the analysis is the significance of the analysis sample which concerns more than 2500 observations. This study provides valuable insights into the relationship between EU banks' climate change and sustainability initiatives on the one hand and financial performance on the other, highlighting important implications for corporate policy aimed at maximizing performance. This study also highlights the role of bank governance in improving bank performance. Future research could broaden the scope of the study to include data from other regions of the world, consider a broader range of variables related to climate change and sustainability, and use alternative data sources to verify the findings of this research.

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