THE IMPACT OF SUSTAINABLE PRACTICES ON CREATING VALUE FOR BANKS IN EMERGING COUNTRIES

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ABSTRACT

Objective: Analyze the impact of sustainable practices on the value of banks, located in 28 countries in emerging economies of Latin America, Caribbean, Africa, Asia, Europe and Middle East.

Theoretical framework: The current lack of consensus on the impact of sustainable practices in the banking industry may be an indication of the existence of friction related to market efficiency, resulting from informational asymmetry, agency conflicts and lack of adequate signaling between different stakeholders.

Methodology: Hypothesis H1 - Sustainable practices impact the value of the banks in the study is verified through a regression with pooled data and robustness tests.

Results and conclusions: Banks consider that the adoption of sustainable practices does not add value in the short term.

Research implications: A possible explanation for this fact is presented by the overinvestment hypothesis. According to it, the application of resources in sustainable activities causes banks to divert resources from their main objective of maximizing shareholder wealth to meet the demands of other stakeholders - which leads to a reduction in their value.

Originality/value: Among the differences in this study is the analysis of banks located in emerging countries. The result obtained provides feedback to the financial market in its investment decisions in banks that adopt sustainable practices, especially in developing countries. Another aspect to be highlighted is the maintenance or change of policies adopted - by countries’ regulatory entities - in terms of encouraging the adoption of sustainable practices by institutions.

Keywords: Sustainable Practices, ESG, Value Creation, Banks, Emerging Countries.

O IMPACTO DE PRÁTICAS SUSTENTÁVEIS NA CRIAÇÃO DE VALOR AOS BANCOS DE PAÍSES EMERGENTES

RESUMO

Objetivo: Analisar o impacto das práticas sustentáveis no valor dos bancos, localizados em 28 países de economias emergentes na América Latina, Caribe, África, Ásia, Europa e Oriente Médio.

Referencial teórico: A atual ausência de consenso sobre o impacto das práticas sustentáveis na indústria bancária pode ser um indício da existência de atritos relacionados à eficiência de mercado, decorrentes de assimetria informacional, conflitos de agência e falta de sinalização adequada entre os distintos stakeholders.

Metodologia: A hipótese H1 - As práticas sustentáveis impactam o valor dos bancos do estudo é verificada por meio de uma regressão com dados pooled e testes de robustez.

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1 INTRODUCTION

The role of the banking industry, as well as its impact on society, is the subject of constant discussion in the literature. Banks broker transactions between market participants, bringing life and liquidity to the country's financial system. Thus, its operational and financial performance are targets of special attention, since it measures the generation of results to its stakeholders, as well as its contribution to the growth of the country's economy (Ali et al., 2021; Dragomir et al., 2022; Xiazi & Shabir, 2022). Such aspects are even more pronounced in emerging country banks (Nobanee & Ellili, 2022; Djalil et al., 2023).

Therefore, it is in the interest of investors, creditors, customers, regulators and other stakeholders to monitor the banks' performance through (non)financial metrics and reporting. Among the most relevant financial metrics is whether or not to create value to your shareholders. Value creation indicates to the market that the bank is fulfilling one of its most elementary commitments to shareholders (Nizam et al., 2019; Chen & Xei, 2022). More recently, however, the adoption of sustainable practices signals the institution's commitment to its continuity over the long term. These practices relate to the environmental, social and corporate governance dimensions - environment, social and corporate governance (ESG) (Azmi et al., 2021; Zumente & Bistrova, 2021; Chen & Xei, 2022).

The impact of corporate governance practices, or corporate social responsibility - corporate social responsibility (CSR) - on the value of financial institutions has been discussed for a long time. There are authors who identify a positive relationship between both proxies (Azmi et al., 2021; Chen & Xei, 2022; Hossain, 2022). However, others find a negative or statistically insignificant relationship (Dragomir et al., 2022; Nobanee & Ellili, 2022). An evolution of the concept of CSR is the scores of ESG. Again, there are studies that identify a controversial relationship between the implementation of sustainable practices and the value of banks (Danisman, 2022; El Khoury et al., 2023; Koapaha, 2023; Menicucci & Paolucci, 2023). This fact indicates that this issue is not yet accepted in the banking industry.

Moreover, according to PwC (2017), the global economy is expected to double in size by 2032 and almost double again by 2050 - when six of the seven largest economies will be from emerging territories. As emerging economies grow larger and richer, the demand for banking services will increase. China's gross domestic product (GDP) has now surpassed that of the United States, making it the largest economy in the world.
of the US in terms of purchasing power parity. India is the third global economic giant. This phenomenon is already shaping global markets.

In light of the above, this study aims to analyze the impact of sustainable practices on the value of emerging economies banks. This objective is verified by means of a regression with pooled data for a final sample of 111 publicly traded banks, located in Latin America, the Caribbean, Africa, Asia, Europe and the Middle East. Data is obtained from the Capital IQ databases of Standard and Poor's (S&P), Bloomberg and World Bank.

Differentials in this study include the analysis of banks located in emerging countries, as well as the confirmation or not of the effect of sustainable practices on the value of these institutions. In addition, the contribution is highlighted by the measurement of the proportion of this effect. The result obtained feeds back into the financial market in its decisions to invest in banks that adopt sustainable practices, above all in developing countries. Another aspect to be highlighted is the analysis of the impact of the policies adopted - by the countries' regulatory authorities - in terms of stimulating the adoption of sustainable practices by organizations.

2 THEORETICAL GROUNDS

The current lack of consensus on the impact of sustainable practices on the banking industry may be an indication of frictions related to market efficiency, stemming from information asymmetry, agency conflicts and lack of adequate signaling between different stakeholders. Information asymmetry occurs when - in an economic transaction - one party has more information than the other (Akerlof, 1970). This can be mitigated by disclosing information on banks' sustainable practices. By implementing ESG activities, there is a reduction in monitoring costs and expenses related to debt financing with depositors - who agree to receive less interest. This promotes an increase in operational results and demand for their securities and shares (Azmi et al., 2021; El Khoury et al., 2021; Nobanee & Ellili, 2022). This minimizes the irrational behavior of investors and reduces agency conflict between the parties.

According to Jensen and Meckling (1976), companies consist of a set of contracts between one or more individuals. Among them, the owners or principals and managers or agents stand out. A priori, the latter should act in the interests of the former. It so happens that the interests of both, at times, are conflicting. It is therefore necessary to use instruments to mitigate these conflicts. Among these tools, the dissemination of reports on sustainable business practices is highlighted. These reports promote greater management engagement and increased operational efficiency of the bank, bringing the interest of different stakeholders closer (Azmi et al., 2021; Nobanee & Ellili, 2022).

In turn, stakeholder theory states that the company has an obligation to maximize the value of all stakeholders - or stakeholders - and not just its shareholders (Freeman, 1984). Banks are public interest entities, with great responsibilities to their stakeholders. Thus, any failure committed adversely affects owners, customers, creditors, employees, government and society in general (Bătăe et al., 2021). From the perspective of this theory, sustainability practices represent a source of corporate innovation and competitive advantage (Azmi et al., 2021; El Khoury et al., 2021). Therefore, the publication on ESG practices signals to the market that the bank is committed to community development and is less willing to engage in practices that harm local stakeholders (Nobanee & Ellili, 2022).

In fact, according to the signaling theory, companies with positive future prospects must differentiate themselves from the others by means of voluntary (non) financial disclosures. The publication of ESG practices meets this assumption and contributes to mitigating the bank's idiosyncratic risk with stakeholders (Izcan & Bektas, 2022; Kolsi et al., 2023). In addition, there is an increase in preference for green corporate bonds and shares, even if returns to
investors are lower than those that are not (Pástor et al.; 2022). This characteristic occurs especially among long-term investors, who show a preference for more transparent companies with higher levels of ESG. According to Walz (2022), the effects of signaling are more pronounced in emerging economies.

In the case of emerging countries, the adoption of sustainable practices has contributed to the expansion of good corporate governance practices, reducing the risk of corruption and promoting the operational efficiency of companies (Zhou et al., 2021; Nobanee & Ellili, 2022; Dajli et al., 2023). In addition, as regards the social dimension, there is the identification of initiatives that promote gender equality, respect for human rights and improvements in working conditions (Martínez-Ferrero et al., 2021; Dragomir et al., 2022). Finally, on the environmental dimension, such policies reduce greenhouse gas emissions, improve energy efficiency and conservation of natural resources (Bâtae et al., 2021; Menicucci & Paolucci, 2023). As to the financial aspects, we observe value creation (Chen & Xei, 2022; Dragomir et al., 2022).

On the contrary, studies by Buallay et al. (2020), Di Tommaso & Thornton (2020), La Torre et al. (2021) and Nobanee & Ellili (2022) identify a negative relationship between sustainable practices and the value of financial institutions. The authors note that the reduction in value creation can be seen as a willingness of shareholders to sacrifice part of their wealth to ensure the sustainability of banks. Moreover, the negative impact of ESG on the value of banks can also be seen as a diversion of investments, to the detriment of the use of resources on higher return assets. Thus, there is a lack of consensus on the impact of ESG scores on the value of banks. The statistical significance of these results supports the following hypothesis: \( H1 \) - Sustainable practices impact the value of banks.

Table 1 summarizes the results of empirical studies analyzing the impact of sustainable practices on the creation of value in financial institutions - using ordinary least squares regression models (OLS). Buallay et al. (2020) investigate 59 banks in the Middle East and North Africa region between 2008 and 2017. The authors identify a negative and statistically significant relationship between sustainability practices and value creation. This means that investors in these markets understand that the costs of implementing ESG activities are greater than their benefits. Di Tommaso and Thornton (2020) also identify a negative result between ESG and banks' value, when analyzing data from 81 European financial institutions from 2007 to 2018. The authors highlight that investments in sustainable practices are excessive, draining scarce resources from more profitable investments.

Azmi et al. (2021) analyze data from 251 banks - in 44 emerging countries - between 2011 and 2017. Unlike previous studies, they identify a positive nonlinear relationship between sustainable practices and value creation for banks. The authors find that low levels of ESG activity positively impact its value. However, the results become decreasing as ESG levels increase. In turn, La Torre et al. (2021) also obtain a negative result between ESG and the value of banks. They examine data from 44 European banks between 2008 and 2019. For them, this negative relationship supports the strategy of the banking authorities. These authorities are putting more emphasis on risks than ESG opportunities in order to "force" banks to adopt a new business model in this early phase of sustainability transition.

Like Azmi et al. (2021), Bakri et al. (2022) find a positive relationship by examining data from 24 Malaysian financial institutions between 2011 and 2020. For the authors, investors - who are particularly concerned about the ESG agenda - will punish banks with low scores of ESG, resulting in a lower valuation of these institutions. As for Koapaha (2023), he investigates data from 208 U.S. banks between 2015 and 2020. The author also identifies a positive relationship between sustainable practices and the value of banks. Even during the COVID-19 pandemic, investors understand institutions’ commitment to long-term sustainable outcomes. Finally, Bhaskaran et al. (2023) analyzed data from 472 banks in developed and emerging economies - from 2015 to 2019. The authors also identify a positive and significant relationship...
between ESG practices and bank value. Furthermore, they find that the better capitalized banks (with higher levels of risk) tend to invest more (less) in social initiatives.

**Table 1 - Summary of results of empirical studies - Tobin's Q**

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<tr>
<td></td>
<td>Sinal</td>
<td>SE</td>
<td>Sinal</td>
<td>SE</td>
<td>Sinal</td>
<td>Sinal</td>
<td>Sinal</td>
</tr>
<tr>
<td>ESG</td>
<td>- 1%</td>
<td>- 5%</td>
<td>+ 10%</td>
<td>- 1%</td>
<td>+ 1%</td>
<td>+ 1%</td>
<td>+ 1%</td>
</tr>
<tr>
<td>SIZ</td>
<td>+ 1%</td>
<td>- 5%</td>
<td>+ s/s</td>
<td>- 1%</td>
<td>+ 5%</td>
<td>+ s/s</td>
<td>- 1%</td>
</tr>
<tr>
<td>ROA</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>AQ</td>
<td>+ 5%</td>
<td>- 5%</td>
<td>- s/s</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>+ 1%</td>
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<tr>
<td>T1R</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>WGI</td>
<td>+ s/s</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
<tr>
<td>GDPG</td>
<td>+ 1%</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
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<tr>
<td>DCPB</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
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</table>

**Notes:** SE - Statistical significance, n/a - not available, s/s - not significant

### 3 SEARCH METHOD

The initial sample consists of 354 publicly traded banks - with positive equity and a market capitalization value greater than zero - in the last trading floor of the year - between 2013 and 2022. Such banks are located in emerging countries in Latin America and the Caribbean, Africa and the Middle East, Europe, Asia and the Pacific. Of these, 198 banks are excluded because they have less than 5 years of ESG scores. A further 45 banks are excluded, whose data availability for the control variables is less than 5 years. Thus, the final sample is composed of 111 banks located in 28 countries, of which: 12 banks and 4 countries in Latin America and the Caribbean, 45 banks and 13 countries in Africa and the Middle East, 7 banks and 4 countries in Europe, and 47 banks and 7 countries in Asia and the Pacific.

The data is obtained from the Capital IQ database of Standard and Poor's (S&P), Bloomberg and World Bank. For data analysis, the Stata econometric software is used. The verification of \( H1 \) - Sustainable practices impact the value of banks is done by means of descriptive statistical tests, correlation analysis and regression with pooled data - the model of which is presented in Equation 1. The variables in Equation 1 are described in Table 2.

The purpose of descriptive statistics is to describe measures of central position and dispersion, in addition to the maximum and minimum values of the sample data. Pearson's coefficient of correlation analysis allows one to determine the signal and intensity of the relationship between two variables. As for regression analysis with pooled data, his post-estimation tests examine the homocedasticity of residues, absence of high multicollinearity between explanatory variables and the linearity of the parameters (Wooldridge, 2015; Favero & Belfiore, 2019). All variables are winsorized at the 5% level.

The robustness of the results is verified by the linear regression of two sub-samples - high and low value banks. This classification is obtained by means of the median (1.00) of the Tobin variable Q (TQ) - see Table 3. In order to avoid the same bank appearing in one subsample and another, the median was calculated on the basis of the annual average (2013-2022) of each bank. Thus, 56 (55) banks are classified in the subsamples above (below) the median TQ.

\[
\text{Value}_{it} = \alpha + \beta_1 \text{ESG}_{it} + \beta_2 \text{SIZ}_{it} + \beta_3 \text{ROA}_{it} + \beta_4 \text{AQ}_{it} + \beta_5 \text{T1R}_{it} + \beta_6 \text{WGI}_{it} + \beta_7 \text{GDPG}_{it} + \beta_8 \text{DCPB}_{it} + \mu_{it} \tag{1}
\]
Where:

\[ i = \text{undertaking}; \ k = \text{country}; \ t = \text{year}; \ \mu_{ikt} = \text{waste} \]

**Table 2 - Variable description**

<table>
<thead>
<tr>
<th>Var. description</th>
<th>SE</th>
<th>Fórmula</th>
<th>Components</th>
<th>Ref.</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables - Value</strong></td>
<td></td>
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<tr>
<td>TQ Tobin Q</td>
<td>n/a</td>
<td>( TQ = \frac{MVE + BVL}{TA} )</td>
<td>( MVE = \text{Market value of equities} ) ( BVL = \text{Book value of total liabilities} ) ( TA = \text{Total assets} )</td>
<td>a</td>
<td>CIQ</td>
</tr>
<tr>
<td>MVE Market value of equities</td>
<td>n/a</td>
<td>( MVE = \ln (P*S) )</td>
<td>( \ln = \text{Neperian logarithm} ) ( P = \text{Closing price of the last business day of the year} ) ( S = \text{Number of outstanding shares at the end of the year} )</td>
<td>b</td>
<td>CIQ</td>
</tr>
<tr>
<td>TE Total equity</td>
<td>n/a</td>
<td>( TE = \ln (TPE + TCE + TMI) )</td>
<td>( \ln = \text{Neperian logarithm} ) ( TPE = \text{Total preferred equity} ) ( TCE = \text{Total common equity} ) ( TMI = \text{Total minority interest} )</td>
<td>c</td>
<td>CIQ</td>
</tr>
<tr>
<td><strong>Independent variable</strong></td>
<td></td>
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</tr>
<tr>
<td>ESG ESG score</td>
<td>+/-</td>
<td>ESG disclosure score</td>
<td>Scores varies from 1 to 100</td>
<td>d</td>
<td>Bloomberg</td>
</tr>
<tr>
<td><strong>Banks control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZ Size</td>
<td>+</td>
<td>( BS = \ln (TA) )</td>
<td>( \ln = \text{Neperian logarithm} ) ( TA = \text{Total asset} )</td>
<td>e</td>
<td>CIQ</td>
</tr>
<tr>
<td>ROA Return on assets</td>
<td>+</td>
<td>( ROA = \frac{NI}{TA} )</td>
<td>( NI = \text{Net income} ) ( TA = \text{Total asset} )</td>
<td>f</td>
<td>CIQ</td>
</tr>
<tr>
<td>AQ Asset quality</td>
<td>-</td>
<td>( AQ = \frac{NPL}{TL} )</td>
<td>( NPL = \text{Nonperforming loans} ) ( TL = \text{Total gross loans} )</td>
<td>g</td>
<td>CIQ</td>
</tr>
<tr>
<td>T1R Tier 1 ratio</td>
<td>+</td>
<td>( T1R = \frac{T1}{TRWA} )</td>
<td>( T1 = \text{Tier 1 capital} ) ( TRWA = \text{Total risk-weighted assets} )</td>
<td>h</td>
<td>CIQ</td>
</tr>
<tr>
<td><strong>Country control variables</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>WGI Worldwide Governance Indicators (j)</td>
<td>+</td>
<td>( WGI = \text{It varies between -2.5 and 2.5. The higher the index, the better} )</td>
<td>The index is derived from the average six-dimensional estimate - control of corruption, government effectiveness, political stability and absence of violence/terrorism, regulatory quality, rule of law and voice and accountability. The estimate gives the country score, for each dimension, in units of a standard normal distribution.</td>
<td>i</td>
<td>World Bank</td>
</tr>
<tr>
<td>GDPG Gross domestic product growth</td>
<td>+</td>
<td>( GDPG = \frac{(GDP/GDP_{t=1})}{-1} )</td>
<td>( GDP = \text{Gross domestic product at market prices based on constant local currency. Aggregates are expressed in U.S. dollars.} ) ( t = \text{year} )</td>
<td>k</td>
<td>World Bank</td>
</tr>
<tr>
<td>DCPB Domestic credit to private sector by banks</td>
<td>+</td>
<td>( \frac{DCPS}{GDP} )</td>
<td>( DCPS = \text{Domestic credit provided to the private sector by financial corporations} ) ( GDP = \text{Gross domestic product} )</td>
<td>l</td>
<td>World Bank</td>
</tr>
</tbody>
</table>

**Remarks:** Var - Variables; SE - Expected sign; Ref - Bibliographical references; n/a - Not applicable; CIQ - Capital IQ PRO (S&P)

**Notes:**
(a) Miralles-Quirós et al. (2019); Buallay et al. (2020); Azim et al. (2021); Bătae et al. (2021); Chen and Xie (2022); Bhasharanet al. (2023); El Khoury (23)
(b) Ersoy et al (2022)
The Impact of Sustainable Practices on Creating Value for Banks in Emerging Countries

c) Di Tommaso and Thornton (2020); La Torre et al. (2021)
d) Esteban-Sanchez (2017); Buallay et al. (2020); Azim et al. (2021); Bătae et al. (2021); El Khoury Bhet al. (2023); Menicucci e Paolucci (2023)
e) Yu and Zhao (2015); Buallay et al. (2020); Hossain (2021); Chen and Xie (2022); Bhasharan et al. (2023); El Khoury et al.(2023); Menicucci e Paolucci (2023); Sun and Gou (2023)
f) Esteban-Sanchez (2017); Finger et al. (2017); Bătae et al. (2021)
g) Buallay et al. (2020); Wagdi & Salman (2022); Bhaskaranth et al. (2023); Koapaha (2023); Mahmud (2023)
h) Finger et al. (2017); Bătae et al. (2021)
i) Kaufmann et al. (2011); Buallay et al. (2020); Al-Ajmi et al. (2023)
j) According to World Bank, information on WGI is updated annually at the end of September (http://info.worldbank.org/governance/wgi/Home/FAQ). Moreover, there is no significant variation in their indicators from one year to the next (http://info.worldbank.org/governance/wgi/Home/Documents#wgiDataCrossCtry). Therefore, for the year 2022, the simple arithmetic average of the values for the years 2020 and 2021 is attributed.
k) Miralles-Quirós et al. (2019); Buallay et al. (2020); Azim-Quirós et al. (2021); Azim-Quirós et al. (2021)
l) Azim et al. (2021); El Khoury et al. (2023)

4 ANALYSIS AND DISCUSSION OF RESULTS

Table 3 presents the descriptive statistics of the sample data. A strongly balanced panel is observed. Tobin's Q (TQ) averages 1.10. This means that the market value of the banks - on average - added to their chargeable ones, exceeds by 10% the total of their investments the book value. The market value of equities (MVE) and total equity (TE) are presented in millions of dollars and have, respectively, minimum of US$ 185.90 and US$ 375.1 and maximum of US$ 70,217.00 and US$ 109,797.90. Such values characterize a large change in the market and asset values of banks. The ESG scores have very different minimum (9.37) and maximum (60.34) values, indicating that the benefits of adopting sustainability practices are not yet a consensus among institutions. As for the size or size (SIZ) of the banks, measured in millions of dollars, its average value is US$ 210,855.80, with no banks with assets less than US$ 1 million.

On the other hand, the average return on assets (ROA) is 1.64%, with no banks with negative values. On asset quality (AQ), there is an average default rate of 3.96%, relative to total credit transactions. In turn, the Tier 1 ratio (T1R) is an indicator of the financial health of banks and is related to the Basel Index. The bank's equity, on average, amounts to 14.46% of its total risk-weighted assets. As for the global governance index (WGI), it has a positive average of 0.1131. Since their score ranges from -2.5 and +2.5, it turns out that emerging countries have many challenges to overcome to achieve a more stable scenario.

On GDP growth or gross domestic product growth (GDPG), its average is 3.55% in the analysis period. The countries with the largest drop in economic activity (-9.51%) are the Philippines and Peru in 2020. Those with the highest growth rates (11.35%) are Chile, Peru and Turkey in 2021. Despite the high standard deviation (33.93%) between countries’ economic growth, only 11.26% of observations show negative GDPGs, with higher concentration in 2020 during the COVID-19 pandemic.

Finally, as for bank domestic lending to the private sector (DCPB), on average, it accounts for 72.23% of each country's GDP. It is worth noting that China has values above 100% - in all sample years - reaching a maximum value of 185.36% in 2022. The DCPB indicates the level of financial development of a country, since it considers the total loans, financing and other credits granted to the private sector by financial institutions. These are converted into investments that contribute to job creation, increased productivity and - at the very limit - poverty reduction.
As for Table 4, it presents the correlation analysis of the model variables. On the ESG variable, it shows a negative correlation with TQ; however, positive with the equity to market value (MVE) and accounting (TE) metrics. This suggests a negative perception by depositors and other creditors of banks of their investments in sustainable practices. Still on the relationship between the other explanatory variables and the banks' value proxies, in the majority, there is a positive relationship with their size (SIZ) and return on assets (ROA) - as expected. Negative relationships are observed in the default index (AQ) and the need to reserve its own capital (T1R). In a financial institution, the greater the solvency of credit operations and the use of resources in lending and selling cash products, the better. In turn, the macroeconomic control variables, in their majority, also show an expected positive relationship with TQ, LVM and TE.

On the correlations between the explanatory variables, we highlight the negative Pearson coefficient (-0.44) between AQ and SIZ, as well as the positive one (0.45) between TIR and ROA. The larger the size of the bank, the greater the impact of the default on credit operations. Furthermore, the mattress of capital allocated in the bank reserves signals the soundness of the institution, contributing to the achievement of profit. As to the control variables at the country level, we highlight the high correlations between the ratio of domestic credit granted to the private sector by banks over the GDP (DCPB) with SIZ (75%) and AQ (-45%). Obviously, the banks’ operational scale matters. Thus, large retail institutions, above all, have a greater capacity to contribute to the granting of credit to the private sector. However, this same feature also has a high negative impact in the case of non-payment of financing transactions by debtors.
Table 5 presents the results of the *pooled* regression model. As for the tests of the assumptions, the models present heteroskedasticity, corrected by the use of robust standard errors - *vce(robust)*. On a possible high multicollinearity of the explanatory variables, it is found to be nonexistent due to the variance inflation factor (IVF) being less than 10 in all models. With respect to the general results of the models, it is verified that there is at least one non-zero angular coefficient (Prob>F = 0.000), confirming its significance.

When considering the other variables of the econometric model, the *scores* of ESG start to show a negative - and statistically significant - relationship at the level of 1% - with all the dependent variables - TQ, MVE and TE. Such results support *H1 - Sustainable practices impact the value of banks* and is in line with that obtained by Buallay et al. (2020), Di Tommaso & Thornton (2020) and La Torreet al. (2021) - see Table 1. The signal given to the market is that investors are paying a higher premium due to the adoption of sustainable practices by banks. Thus, banks and shareholders are willing to forgo higher returns through their long-term social and environmental commitment.

This result corroborates the theories of information asymmetry, agency, and *stakeholder* theories. Disclosure of non-financial information contributes to increased transparency of managers’ actions to the market, minimizing potential agency conflicts. In addition, investments in sustainable practices highlight banks’ commitment to customers, depositors, regulators, the market, the environment and society at large.

As for the control variables of the banks, most of them show statistical significance and sign according to the expected, in relation to all dependent variables. In the case of bank size (SIZ) and return on assets (ROA), there is a positive relationship with TQ, MVE and TE. So, with every 1% increase in size, there is an increase of 0.013% in TQ, for example. This result ratifies those obtained by Buallay et al. (2020), Bakri et al. (2022) and Koapaha (2023) - see Table 1. According to Usman (2023), large banks contribute to systematic risk. Given this, in the event of a financial crisis, there is a concern of governments to grant subsidies to avoid their bankruptcy and consequent contagion effects on the market. Therefore, increasing their leverage allows for a greater volume of resources to be invested in credit, treasury and service operations, contributing to their valorization.

On the default of credit operations (AQ), the lower its value, the better. Thus, the negative result verified indicates that the 1% reduction in the AQ implies an increase in the value of the bank of 0.28% (TQ). This effect is expected and is in line with that obtained by Di Tommaso and Thornton (2020) - see Table 1. Asset quality is a measure of bank risk and represents the fraction of credit transactions that is not received, impairing the financial performance of the institution. In relation to the ratio of a bank’s equity to its total risk weighted assets (T1R), there is a positive relationship with MVE and TE. This means that with every 1% increase in T1R, there is a 4.58% increase in your TE. The T1R measure is related to the Basel indices which are an effort to coordinate banking regulations around the world, with the aim of strengthening the international banking system (Thomas et al., 2023). Therefore, its increase reduces the risk of bankruptcy and values the banks.
The control variables at the macroeconomic level, on the other hand, verify the impact of the level of governance (WGI), GDP growth (GDPG) and the volume of domestic credit granted to the private sector (DCPG) - for each country - on the value of the banks. The results point to a positive and statistically significant result between WGI and TB - unlike that obtained by Buallay et al. (2020) - see Table 1. The improvement in the six dimensions - control of corruption, government effectiveness, political stability and absence of violence/terrorism, regulatory quality, rule of law and voice and accountability - that make up the WGI index implies a safer business environment for society at large, attracting international investors, including.

In relation to GDP growth (GDPG), the result indicates a negative relationship with bank value creation (TQ), contrary to what was expected. However, it ratifies that obtained by La Torre et al. (2021) - see Table 1. Finally, banks’ participation in fostering domestic credit to the private sector (DCPB) also has a negative impact on the bank’s value creation (TQ). The DCPB is a proxy for financial development and demonstrates how strong and developed a country's economy is - without the need for public funding. This outcome may be related to the increased credit risk indicated in AQ, which can also be observed in Table 4.

Table 5 - Regression result with dashboard data

<table>
<thead>
<tr>
<th>Variáveis</th>
<th>TQ</th>
<th>MVE</th>
<th>TE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESG</td>
<td>-0.001***</td>
<td>-0.011***</td>
<td>-0.001**</td>
</tr>
<tr>
<td>SIZ</td>
<td>0.013***</td>
<td>1.048***</td>
<td>0.923***</td>
</tr>
<tr>
<td>ROA</td>
<td>4.620***</td>
<td>40.982***</td>
<td>4.837***</td>
</tr>
<tr>
<td>AQ</td>
<td>-0.280***</td>
<td>-2.161***</td>
<td>0.265</td>
</tr>
<tr>
<td>T1R</td>
<td>0.108</td>
<td>5.793***</td>
<td>4.584***</td>
</tr>
<tr>
<td>WGI</td>
<td>0.026***</td>
<td>0.321***</td>
<td>0.038***</td>
</tr>
<tr>
<td>GDPG</td>
<td>-0.135**</td>
<td>-2.015***</td>
<td>-1.045**</td>
</tr>
<tr>
<td>DCPB</td>
<td>-0.026***</td>
<td>-0.138**</td>
<td>0.103***</td>
</tr>
<tr>
<td>Intercepto</td>
<td>0.857***</td>
<td>-3.601***</td>
<td>-2.174***</td>
</tr>
</tbody>
</table>

Note: Statistically significant coefficients at the level of 1% (***) and 5% (**)

Note: The number of 979 observations differs from those reported in Table 3 - Descriptive statistics. This is due to the fact that - when running the regression tests - Stata eliminates all observations that have a missing value - for any of the variables considered in the model. The variable T1R has only 1,037 observations. In addition, 58 other observations are excluded due to the lack of values - 29 of ESG, 9 of AQ and 20 DCPB.

In turn, Table 6 presents the results of the robustness tests of the Equation 1 model. To this end, two groups of sub-samples with high and low bank values are analyzed. This classification is done by means of the median annual averages of the variables TQ, MVE and TE. Banks whose values of the dependent variables are equal to or above (below) the median are classified with high (low) value. All models are statistically significant (Prob > F = 0.000). Moreover, the results show that regardless of the level of value of banks - whether high or low - sustainable practices reduce their value (TQ, LVM and TE). This again confirms H1 - Sustainable practices impact the value of banks.

As to the control variables of the banks, there are no antagonistic results to those presented in Table 5 - in their majority. The exception to be highlighted is the negative relationship between T1R and TQ for low-value banks. In this case, the higher the level of equity retention, the lower the value of the institution. One possible explanation for this result is their higher capital requirement in circulation. Thus, the allocation of equity resources
reduces the leverage capacity of your operations. Regarding the country control variables, there are also no very different results from those indicated in Table 5. However, the positive relationship between GDPG and TQ for low-value banks is highlighted. In countries - whose governments are not an unequivocal source of credit - the private sector makes use of these banks as an alternative source of funding, valuing its shares - even though it is subject to higher interest rates.

<table>
<thead>
<tr>
<th>Table 6 - Robustness test</th>
<th>TQ</th>
<th>MVE</th>
<th>TE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variáveis</td>
<td>≥ Median</td>
<td>&lt; Median</td>
<td>≥ Median</td>
</tr>
<tr>
<td></td>
<td>Coef</td>
<td>P-val</td>
<td>Coef</td>
</tr>
<tr>
<td>ESG</td>
<td>-0.00</td>
<td>0.00</td>
<td>-0.00</td>
</tr>
<tr>
<td>SIZ</td>
<td>0.00</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>ROA</td>
<td>4.74</td>
<td>0.00</td>
<td>1.13</td>
</tr>
<tr>
<td>AQ</td>
<td>-0.30</td>
<td>0.00</td>
<td>-0.10</td>
</tr>
<tr>
<td>T1R</td>
<td>0.03</td>
<td>0.67</td>
<td>-0.24</td>
</tr>
<tr>
<td>WGI</td>
<td>0.26</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>GDPG</td>
<td>-0.12</td>
<td>0.08</td>
<td>0.18</td>
</tr>
<tr>
<td>DCPB</td>
<td>-0.00</td>
<td>0.90</td>
<td>-0.01</td>
</tr>
<tr>
<td>Intercepto</td>
<td>0.92</td>
<td>0.00</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Notes: Statistically significant coefficients at 1% (***) and 10% (*)

To sum up, the results indicate that, in emerging countries, banks consider that adopting sustainable practices does not add up to the desired value - in the short term. A possible explanation for this is provided by the "over-investment" hypothesis. According to her, the application of resources in sustainable activities makes the banks divert resources from their main objective of maximizing the wealth of the shareholders to meet the demands of the other stakeholders — which leads to a reduction in their value.

On the other hand, this result also helps to understand the approach of some banking authorities that focus their supervision on ESG risks - such as environmental ones. Such an approach should encourage banks to move towards a more sustainable business model - in the medium and long term (Equator Principles Association, 2020; Di Tommaso & Thornton, 2020; La Torre et al., 2021). Thus, it has to be said that despite society's expectation for increased sustainable practices and capital reallocation to "green" initiatives - without comprehensive strategic planning and shareholder awareness - can lead to a devaluation of banks.
5 FINAL CONSIDERATIONS

One of the main functions of commercial banks is the intermediation of financial flows between savers and those who need money. As such, they are a fundamental part of the development of the markets and of the soundness of the national financial system. Associated with this fact, society's perception of environmental and social issues has evolved over time. Therefore, an expectation arises about the role of banks in this context, as well as the increased interest of investors and other stakeholders in ESG scores.

As banks start to look for a management model that balances their (non-) financial performance, there is a need to investigate the impact of sustainability practices on their value. However, existing research on the theme shows results that have not yet been approved. There are those who point to the creation, destruction or even the absence of any effect of sustainable practices on the value of banks. This is even more pronounced in developing countries.

In view of the above, this study examines the impact of sustainable practices on the value of banks in emerging economies. The hypothesis stemming from this goal is: \( H1 \) - Sustainable practices impact the value of banks. The value proxies correspond to the variables Tobin's Q (TQ), market value (MVE) and the book value (TE) of the banks' equity. Sustainable practices are observed by means of the general ESG score. The final sample consists of 111 publicly traded banks. Data is analyzed using descriptive statistics, correction analysis, and pooled regression. They are obtained for the period from 2013 to 2022, from the Capital IQ, Bloomberg and World Bank bases.

The results of the pooled regressions in Table 5 confirm the \( H1 \) - Sustainable practices impact the value of banks, indicating a negative and statistically significant relationship in all models analyzed. The robustness test results in Table 6 also ratify the negative relationship between ESG scores and banks value proxies. These same effects are seen in studies by Buallay et al. (2020), Di Tommaso and Thornton (2020) and La Torre et al. (2021). Market signals are that investing in sustainable practices does not promote positive financial results in the short term.

There are investors who understand that the allocation of resources in sustainable practices diverts the banks' main focus from generating wealth to their shareholders, to meet the interests of other stakeholders. However, changes in legislation imposed by regulatory authorities - such as the "practice or explain" policy - encourage the market to accept the return of these measures in the medium and long term. Among the contributions of this study is the analysis of the effect of sustainable practices on the value of banks located in emerging countries. The result obtained may direct the maintenance or alteration of the policies adopted - by the countries' regulatory authorities - in terms of stimulating the adoption of sustainable practices by the institutions.

As to the limitations of this study, no analysis was made of banks with closed capital, negative net worth or market capitalization value less than zero. In addition, those who present less than 5 years of ESG scores were also excluded. This meant that other emerging countries not in the final sample were not taken into account. For the purposes of this research, it is suggested to analyze the moderating effect of the following aspects - on ESG - on the value and financial performance of banks: i. board characteristics - size, gender diversity and independence and ii. banking risks - market, credit, liquidity and operational.

REFERENCES


