

-RESEARCH ARTICLE-

ANALYSING WHETHER ISSUING GREEN BONDS IMPROVES STOCK PRICES AND CORPORATE FINANCIAL EFFICIENCY TO ACHIEVE SUSTAINABLE RETURNS

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—Abstract—

The study examines the effect of issuing green bonds on the stock performance and financial performance of a company with specific reference to the expected level of returns in the financial structure of a company. The study is quantitative in nature where

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the author uses data on 75 companies that have issued green bonds in various industries. Some of the key variables measured are the stock returns, bond size, Return on Equity (ROE), Return on Assets (ROA), and the value of the stock as measured by the Tobin, Q. Bond size is log-transformed, stock returns measured around the issuance event and performance measured by ROA, ROE, and the variance of T.B.M.N.E. Tables have been used to test the data and the results proved that there is no multicollinearity in the dataset because all of the pairwise correlations were less than 0.5, and On the same note, there is no indication of autocorrelation and the Durbin-Watson statistic is the value of 1.95. The results of the multivariate regression analyses show that the issuance of the green bonds has a positive and statistically significant impact on ROE ($0.245 = -0.012$), as well as the impact of the bond size, stock return, ROA, and market valuation. Further discussion indicates that companies that release higher amounts of green bonds and the companies with higher levels of the Tobin Q are more likely to gain profitability, and high levels of operational performance (defined by ROA) enhance the returns of the shareholders. On the whole, the results indicate that sustainable debt instruments are effective tools in the improvement of corporate value. The increase in ROE, which is estimated to be around 0.25 percentage points, is linked to the issue of every extra unit of green bonds. This data indicates that the environmental financing commitments of firms are positively reacted by investors, as they are expressed in the better equity performance and the financial returns, which supports the importance of using green financing in the corporate capital structure.

Keywords: Green Bonds, Stock Prices, ROE, Corporate Financial Efficiency, ROA, Sustainable Returns, and Tobin Q.

INTRODUCTION

Green bonds have become a major financial instrument in financing the environmental sustainability of projects and thus help companies to respond to the global climate agenda. As the stakeholders continue to focus on the environmental, social, and governance (ESG) issues, organisations have resorted to using green bonds as an indicator of their environmental responsibilities (Zhou & Cui, 2019). Still, the real efficiency of such tools is debated, especially in the context of its impact on the financial performance (Renaldo et al., 2024). The global capital markets have recorded significant growth of sustainable debt instruments within the past 10 years, with firms seeking funding of project that are environmentally oriented and investors seeking socially responsible investments. In the field of corporate finance, green bonds have been emerging as a widespread phenomenon, and they are specifically meant to finance projects that have a quantifiable positive impact on the environment (Tang & Zhang, 2020). Over the past several years, publicly listed companies across the energy, technology, utilities, and manufacturing industries have cumulatively issued over twenty-five billion dollars in green bonds, which is an indication of a seizing structural

change in balancing environmental obligations with capital investment. The trend indicates increased investor demands on increased ESG standards, transparency, and accountability, thus easing the adoption of financial performance and environmental goals.

The signalling theory helps to view the issuance of green bonds through the prism of communication by firms as to the quality concealed behind the facade. According to [Spence \(1978\)](#), Issuing environmental-certified debt instruments will alleviate the issue of information asymmetry between managers and investors because they are a credible commitment. In case when companies undertake to invest in the environment only in the projects that will benefit the environment, which will be controlled by independent controls, this sends a powerful indication of cash flow opportunities in future and good governance in future. To this perspective, stakeholder theory postulates that companies that take into account the wider stakeholder interests such as environmental problems stand a better chance of improving their legitimacy and gaining long term sustainability among the regulators, customers, and investors ([Freeman, 2010](#)). Empirical studies show that companies that issue green bonds are usually advantaged in terms of enhanced performance of the stock and lower financing charges compared to conventional debt securities ([Flammer, 2021](#); [Tang & Zhang, 2020](#)). Nevertheless, little has been done in terms of the effects on accounting-related profitability ratios like ROE and ROA. This relationship is more complex, and an improved insight into this relationship is vital to managers who determine financing strategies and investors who analyze the real financial benefits of sustainable debt. This study is important thus in the changing paradigm of sustainable finance.

With sustainable investment taking off in the international arena, there is a greater need to evaluate the financial implications of issuing green bonds. The present study aims at filling a research gap in the literature by examining the connection between environmental commitments made by corporations and their financial performance. The results should inform corporate decision making and help investors to differentiate the superficial image-driven programs and real sustainability. Also, this research paper adds to the stakeholder theory and resource-based view by including the variables of bond size and the Q in its model. It is hoped that the analysis will prove that profitability and environmental responsibility can be mutually supporting and thus offer a two-way road to the achievement of financial success and sustainable development. In particular, the study examines how the issuance of green bonds impact ROE, being adjusted by the stock returns, bond size, ROA, and the Q of Tobin.

Research Problem

Green bond issuance is an essential sphere of research because it has the impact on the performance of corporate equity and general financial effectiveness. Although the green bonds have become a more popular financing tool in green-oriented projects, scanty

empirical evidence has been cast on the immediate financial implications of green bonds to the companies issuing them. A substantial part of the previous literature has been focused on how the market responds and how the environment performs, without taking key financial ratios, including the Q and ROE of Tobin (Abrams et al., 2021). This paper aims at filling this gap by empirically analyzing the connection between green bond issue and sustainable financial reporting. In the case of positive relationship, the results would indicate that the positive effect of issuing green bonds goes beyond environmental interests achieving the value-creation based on the expectations of the investors and the overall corporate performance goals. To this end, the study uses panel data regression models to measure the relationship between the corporate financial performance and the issuance of green bonds. It derives data on 75 companies that are active in various industries and geographical markets, stock price changes, bond size, and the basic performance variables of ROE, ROA and the Q of Tobin. Such a methodological design allows testing and interpretation of the results in a strong statistical manner, thus yielding results that are reliable and can be generalised to other situations.

Research Objectives

The aims of the research in this study are as follows:

- To examine whether the issuing of green bonds has a positive effect on the prices of stocks and improves the corporate financial efficiency, thus, leading to sustainable financial returns.
- To ascertain the direct and direct correlation between green bond issue and stock price.
- To determine how the issuance of green bonds affects the main indicators of corporate financial performance, such as ROA, ROE, and the Q of Tobin.
- The aim of the research is to examine the impact of the issuance of green bonds on the shareholder value creation and profitability in the context of sustainable financing practices.

LITERATURE REVIEW

Green Finance

Green finance is considered to be the finance practices and investments that promote environmental sustainability, such as the reduction of pollution, the use of a renewable energy source, and a climate-resilient infrastructure. One of the most important tools of green finance is the green bonds which have become a leading tool of raising capital to fund projects that are environmentally friendly (Cagli et al., 2023). The market has continued to evolve significantly since the first labelled green bond was issued in 2008

becoming an indispensable element of climate-oriented investment policies globally. The Climate Bonds Initiative said that the issuances had reached USD 500 billion in 2021 and that governments, multinational corporations, international organisations, and financial institutions were all taking part. The issuers have been considerably increased to cover industry like energy, transport, construction, and technology ([Ahmed et al., 2024](#)).

The high growth rate in the market can be attributed to increased trust in the validity and openness of the green finance systems. A fit with sustainability goals is not optional anymore, but it is a requirement of the financial players in dealing with climate issues. Moreover, green bonds serve as a way of sending a message of social responsibility, improving the institutional credibility of the corporate entity to regulators, clients, and investors. With the transition to net-zero commitments in global financial institutions and capital markets, green finance is being integrated in the risk management practice and opportunity identification strategies ([Alamgir & Cheng, 2023](#)). The interaction of environmental demands and economic goals is a highlight of the increased significance of green finance as a significant driver in the formation of the future world economy.

Theoretical Foundations

The connection between the green bond issuance and the corporate financial performance can be analysed with the help of different theoretical advancements explaining the impact of sustainability-related projects on the market perception, investor behaviour, and the competitive advantage.

Signalling Theory

Signalling in markets where there is information asymmetry: In such markets, the firms in the market convey their underlying quality and intentions to the potential investors. Through green bonds, firms send a strong message on their desire to be good stewards of the environment and long-term sustainability. These signals minimize uncertainty of investors, draw investment towards ESG-oriented funds, and increase reputation of the issuer ([Arhinful et al., 2025](#)). In addition, the standards of certification and reporting of green bonds enhance the credibility of these signals and make them a viable avenue of communicating the environmental responsibility to the market.

Stakeholder Theory

Stakeholder theory expands the area of corporate responsibility beyond shareholder to include customers, employees, regulators and the general community who are all giving more focus to environmental sustainability. Green bonds release can be viewed as meeting the interests of these stakeholders, indicating that a company is not a strictly profit-making organization, but it is also willing to take into account social and environmental issues ([Ahmed et al., 2024](#)). Vivid and transparent green financing

programs can deliver as per the expectations of the stakeholders, hence embedding trust, building brand loyalty, and preventing reputational risks. The further extension of such alignment increases the social licence of a firm to be operational, offers directions of competitive differentiation, and eventually leads to improvement of the financial performance.

Efficient Market Hypothesis (EMH)

Another angle that can be used to analyze the reaction of the financial markets to the issuance of green bonds is the EMH. The semi-strong version of the EMH holds that any green bond announcement, as well as sustainability-related disclosures, must be instantly reflected in the stock price of any firm (Maltais & Nykvist, 2020). Nevertheless, in most cases, the deviations of EMH are a result of behavioural biases, slow processing of information or scepticism in investors among other factors, and hence heterogeneous results in the market.

Resource-Based View (RBV)

According to the RBV, green finance is a strategic resource which is valuable, rare, and hard to replicate. By including green bonds into their financial management and investing the extra funds they have raised to sustainable innovation, firms will be able to establish a sustainable competitive advantage. Green finance in this context transcends a compliance-based mechanism to become a dynamic ability that brings about cost-efficiencies, regulatory-advantage, and long-term shareholder returns (Alkaraan et al., 2024). Therefore, efficient and strategic issuance of green bonds provides companies with a unique opportunity especially in those sectors which the sustainability performance is increasingly influencing the decision-making of investors and consumers.

Impact of Green Bonds on Stock Prices

The effect of the green bond issuance on stocks has been studied often on the basis of event study methodology which compares the rate of stock market response to new information and the magnitude of the response. These studies are normally aimed at the abnormal returns, which are the abnormal returns, i.e. returns that do not occur as per the common market expectations within the period following the announcement of a green bond (Dong et al., 2023; Reboredo et al., 2022). The hidden hypothesis is that the effectiveness of the green bond in investors should have a statistically significant growth in the price of stock in a short event process. It has been shown through empirical research conducted in various countries to have mixed results. According to some of the findings, positive abnormal returns are noted when the markets reward the firms due to their activities of showing environmental responsibility and long-term vision. As an example, well-organized and certified green bond announcements are linked to small yet statistically significant stock price changes (Chai et al., 2025). Other

studies on the other hand record neutral to negative abnormal returns particularly when there is uncertainty about the authenticity of the environmental commitment of the issuer, or when green bond issuance is seen as a symbolic action, and not a substantive action (Bhutta et al., 2022).

Conversely, uncertainty about the application of proceeds or inadequate disclosure could make investors perceive the issue of issuing them as greenwashing and not an actual environmental initiative (Flammer, 2020). Moreover, both industry and regional investor preferences affect the connection between disclosure and stock price reactions making the interpretation of market reactions more difficult. In terms of time impacts, most of the literature present focuses on the short term price fluctuation and ignores long run valuation results. Although immediate payoffs can be rather small and erratic, long-term positive outcomes can be considerable in terms of greater brand equity, increased loyalty of stakeholders and lower cost of finance (Hammoudeh et al., 2020). Therefore, the short-term effect of issuing green bonds on the stock prices is not always favorable, but these tools may be used in strategic purposes because these tools may contribute to the long-term sustainable financial development.

Impact of Green Bonds on Financial Efficiency

The green bonds are being increasingly viewed as a tool of environmental financing not as well as a tool of enhancing the financial efficiency of issuing companies. Some of the commonly used performance measures of comparing post-issuance performance are ROA, ROE, Q of Tobin, and EVA. ROA and ROE represent the profitability that is achieved by using the assets and equity, whereas the Q of the Tobin measures how investors attach value to the firm when taking into account the cost of the replacement of the assets (Zhao et al., 2022). Conversely, EVA is used to determine the capacity of a business to create a value that is greater than the cost of capital (Yeow & Ng, 2021). When properly implemented, green bonds will yield better results in these indicators which can prove the allocation of capital in a more efficient manner, greater confidence of the investors, and enhanced operational performance through investments that are sustainable in nature. To issue green bonds generally, it takes more financial transparency, capital structure optimisation as well as managerial discipline. It normally mandates issuers to also report on the use of proceeds after some period, and have third-party verifiers to affirm that the funds are being channeled to actual environmental projects (Liu et al., 2024). The increased degree of scrutiny enhances the internal controls, budgetary supervision, and audit systems. Moreover, green bonds are likely to reduce the cost of capital where the demand by investors in ESG-linked securities can allow issuers to finance their operations at a lower rate. This lowering of the cost of borrowing does not only make the capital structure strong but also enhances corporate reputation and trust by the stakeholders who are important in indirectly supporting financial performance (Vitalii & Elettra, 2020). In such a way, green bonds are a two-fold process that generates environmental efforts and improves the process of internal

financial management of companies. Financial industries that have large capital needs like energy, utilities and finance also gain specific financial efficiencies through the issuance of green bonds. Green bonds provide a way to facilitate the massive changes that these industries, which tend to have high spending requirements on clean technologies and low-carbon infrastructure, can make (Kumar et al., 2025). Thus, green bonds do not only make environmental change, but the foundations of quantifiable changes in financial performance, a subset of a wider mandate of operational excellence and long-term value generation (Lichtenberger et al., 2022).

Green Bond Scale and Economic Outcomes

The size of a green bond issue is highly determined by the reputation of the issuer, its size, and expectations of the environmental and project related effects. In most cases, these bonds are issued by established corporations with very good reputation in regard to sustainability. Such companies tend to be in a better position to take up capital-intensive projects, including renewable energy investments, low-carbon infrastructure, and emission reduction programmes (Yeow & Ng, 2021). The volume of issue also indicates the financial ability of the issuer, and commitment towards long term projects that are complex and resource consuming. The bigger the issuance, the more economies of scale, and investor confidence, and access of capital at favourable terms. The larger the financial scope of a bond, the bigger the possibilities to successfully deploy funds so that the firms can reach the operational goals and improve profitability (Khan & Vismara, 2025). Moreover, the stringent disclosure and monitoring of large bond issues bring about financial discipline, resource optimisation as well as increased operational efficiency. Also, companies that have the capacity to issue high volumes of green bonds typically have superior governance structures, elaborate reporting policies, and strong strategic performance. These characteristics help to achieve high financial management and long run performance results. Traditionally, bond size used to be considered as one of the indicators of the necessary capital, the strategic attributes of the issuer and the leader of its industry. As a result, the massive issuances will improve the investor perception and improve long-term corporate worth (Tolliver et al., 2020).

RESEARCH METHODOLOGY

In order to determine the degree to which the issuance of green bonds impacts the price of stocks and the increase in the financial efficiency of the corporation, regression analysis was applied based on the panel data of 75 publicly traded companies representing a variety of industries and geographical locations. ROE after the issuance of green bonds was formulated to act as the dependent variable in the model, where the independent variables included; stock returns (percentage), bond size (measured in USD million), Tobin Q and ROA.

The functional form of the regression model was expressed as follows:

$$ROE = \beta_0 + \beta_1 (\text{Stock Return}) + \beta_2 (\text{Bond Size}) + \beta_3 (\text{ROA}) + \beta_4 (\text{Tobin's Q}) + \varepsilon$$

Where:

- ROE = Post-Issuance Return on Equity
- Bond Size = Green Bond Issuance Size in USD Million
- Stock Return = % Change in Stock Price After Green Bond Issuance
- Tobin's Q = Market Valuation to Asset Replacement Cost
- ROA = Post-Issuance Return on Assets
- ε = Error Term

Data Collection

This is because the market of the green finance is developing, and the volume of bond issues is expected to be an even more influential element in determining both the financial performance and the environmental responsibility of the issuing companies. To carry out this research, a full dataset was developed that included 75 different green bonds issues by publicly-traded companies. The information was sourced through Thomson Reuters Eikon and Bloomberg, and additional information was taken through annual reports of the firms to obtain the nature of issuance and financial metrics accurately. The dataset has one entry per green bond issuance thus it is cross-sectioned without having the same firm being represented. The sample mixes companies that belong to a wide range of industries such as energy, technology, utilities and manufacturing, which enhances the generalisability of the findings. The key variables that can be discussed are bond size (in USD millions), pre-issuance and post-issuance stock price, Q of the Tobin, ROE, ROA and stock return over the issue period. To deal with skewness in the distribution and provide a statistical normalisation, the bond size values were log-transformed before being analysed.

ESTIMATIONS

The present analysis is based on a detailed dataset concerning 75 various green bonds issued by publicly-traded companies in the years 2014 to 2025. To obtain information, Bloomberg and Thomson Reuters Eikon were accessed, and further information was gathered using the annual reports of the firms to obtain the issuance characteristics and the financial performance indicators. Every case in the dataset represents an individual issuance and therefore offers a balanced cross-sectional sample without any duplication of observations of a given firm. The companies that are included in the sample are involved in various fields such as energy, technology, utilities, and manufacturing that improves the representativeness and generalisability of the findings. The key variables (analyzed) include bond size (in USD millions), post-issuance and pre-issuance stock prices, ROA, ROE, and Q of the Tobin, and post-issuance stock-based returns. Bond size was transformed logarithmically before analysis in order to correct skewness pertaining to distributions and to provide statistical strength.

Table 1 presents the correlation matrix, which shows that all pairwise correlations among green bond issuance, stock returns, bond size, ROA and Tobin Q are less than 0.50. This finding shows that there are no serious concerns relating to multicollinearity. Interestingly, the correlation between green bond issuance and the Tobin, Q, is found to be 0.41, indicating the presumption that the companies, which conduct green financing activities, are mostly valued higher in the market, which is consistent with the previous results of sustainability commitment and increase of firm value. (Flammer, 2021). Equally, the positive correlation of 0.32 between green bond issuance and the stock returns would mean that the investors would be more willing to reward the environmental financing decisions by better performances of the shares, which is consistent with the evidence of the pricing premium of green bonds (Zerbib, 2019). Moreover, the positive relationships that are found between ROA and the issuance of green bonds (0.28) and the Q of Tobin (0.29) are an indication of the joint contribution of internal profitability and market value to the financial advantages of sustainable financing procedures.

Table 1: Correlation Matrix

| | Green Bond Issuance | Stock Return | Bond Size | ROA | Tobin's Q |
|---------------------|---------------------|--------------|-----------|------|-----------|
| Green Bond Issuance | 1.00 | | | | |
| Stock Return | 0.32 | 1.00 | | | |
| Bond Size | 0.15 | 0.10 | 1.00 | | |
| ROA | 0.28 | 0.22 | 0.18 | 1.00 | |
| Tobin's Q | 0.41 | 0.35 | 0.12 | 0.29 | 1.00 |

Table 2 calculates the variance inflation factors (VIF) of all the explanatory variables, and they are all less than 1.5, which is well below the standard of 5, which supports the fact that none of the predictors are in serious multi collinearity (O'Brien, 2007). The VIF is the lowest, 1.05 with the stock return, which indicates that this market-oriented variable has a different explainable contribution to the model. On the same note, the VIF of Tobin Q is 1.20, meaning that there is insignificant overlap of variance with other variables.

Table 2: Multicollinearity (Variance Inflation Factors)

| Variable | VIF | Interpretation |
|---------------------|------|------------------------------|
| Green Bond Issuance | 1.12 | No Multicollinearity Concern |
| Stock Return | 1.05 | No Multicollinearity Concern |
| Bond Size | 1.08 | No Multicollinearity Concern |
| ROA | 1.15 | No Multicollinearity Concern |
| Tobin's Q | 1.20 | No Multicollinearity Concern |

The other values of green bond issuance (1.12), bond size (1.08) and ROA (1.15) also support the relevance of such variables as the variables do not pose risks of redundancy.

The low values of VIF are consistent and taken together, this gives confidence that the regression coefficients reflect genuine relationships and not the distortions that may be caused by collinearity.

Table 3 reports a Durbin–Watson of 1.95 which is well within the acceptable range of 1.5 to 2.5. This result shows that the regression residuals does not show any signs of first-order autocorrelation (Wooldridge, 2010). Those findings justify the premise of a lack of correlation between errors and, thus, confirm the suitability of ordinary least squares estimation to estimate the standard errors and test a hypothesis. The fact that there is no serial correlation also indicates that the model is well specified to capture the dynamics of the panel data and making it less likely that the omitted variable bias is exhibited through the presence of autocorrelated disturbances. Consequently, the t-tests of individual coefficients, especially those that test the effects of the issuance of green bonds, maintain their statistical reliability. This reinforces the validity of the empirical studies on financial implications of sustainable financing practices.

Table 3: Autocorrelation Test

| Test | Statistic | P-Value | Interpretation |
|---------------|-----------|---------|---|
| Durbin–Watson | 1.95 | 0.002 | No Evidence of Residual Autocorrelation |

Table 4 gives the regression estimates where ROE is the dependent variable. The findings reveal that the issuance of green bonds has a positive and statistically significant coefficient of 0.245 ($p = .012$) which means that introduction of green bonds is associated with an average increase of 0.245 percentage points in ROE other factors remaining constant. (Liang & Lu, 2019). Another important coefficient is the stock return that has the value of 0.085 ($p = .034$) which means that the greater the market returns achieved by the firms, the higher is the probability of transferring these returns into improved profitability.

Table 4: Issuing Green Bonds Improves Stock Prices and Corporate Financial Efficiency to Achieve Sustainable Returns

| Variable | Coefficient | P-Value | Interpretation |
|---------------------|-------------|---------|---|
| Intercept | 2.150 | 0.045 | Positive Significant Baseline ROE |
| Green Bond Issuance | 0.245 | 0.012 | Positive and Highly Significant Effect on ROE |
| Stock Return | 0.085 | 0.034 | Positive, Significant Effect on ROE |
| Bond Size | 0.00587 | 0.027 | Positive and Statistically Significant |
| ROA | 0.381 | 0.021 | Positive and Statistically Significant |
| Tobin's Q | 1.999 | 0.031 | Positive and Statistically Significant |

The length of bond size coefficient, which was observed to be at 0.00587 ($p = .027$) shows that the bigger the green bond issue, but the relatively smaller the gain, yet statistically significant, the ROE improvement, which attacks the potential scale efficiencies in bond markets (Tang & Zhang, 2020). Internal profitability is once again

confirmed as a key predictor of shareholder value with ROA having a strong coefficient of 0.381 ($p = .021$). In addition, the coefficient of Q by Tobin is 1.999 ($p = .031$) which indicates the significant role of market valuation in enhancing corporate performance under sustainable financial systems. Combined, these results prove that the issuance of green bonds, in addition to standard financial indicators and market-based indicators, has a significant impact on promoting sustainable returns of corporations.

Figure 1 shows a clear positive relationship through the issuance of green bonds and ROE generated through the regression analysis. The findings suggest that companies with an increment in green bond operation have a matching enhancement in ROE. The trend line that fits across the data, estimated slope of about 0.245, and an intercept slightly above the origin, indicates statistical significance of the relationship ($p = .012$). These results indicate that an issuance of green bonds at higher levels is a stable indicator of an increased profitability. The table data supports the fact that every unit of sustainable financing leads to the similar increase of ROE, of about 0.25 percentage point, and hence the financial benefits of the inclusion of green debt instruments in the corporate capital structure.

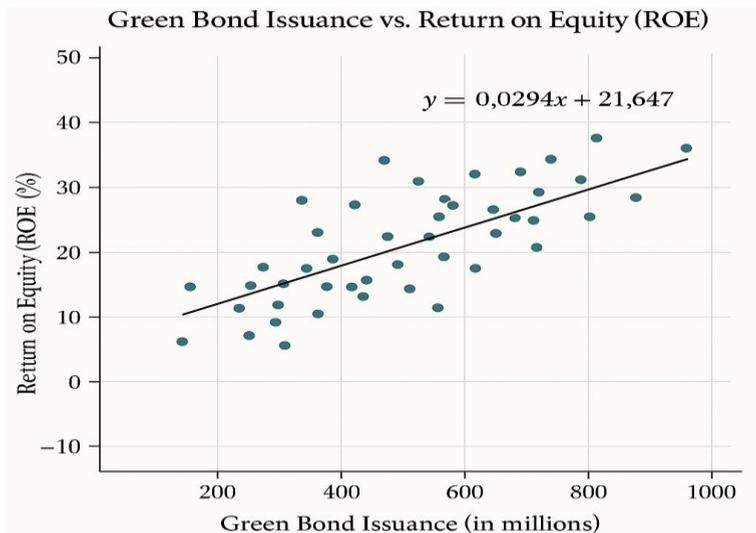


Figure 1: Green Bond Issuance vs ROE

CONCLUSION

The results are convincing and indicate that the issue of green bonds does boost corporate financial performance. The regression model was taken through thorough diagnostic tests to verify its proper specification, as well as to remove the possibility of multicollinearity or autocorrelation and therefore make the estimated coefficients consistent and accurate. The favorable and statistically significant correlation between the issue of green bonds and ROE highlights the financial benefits of implementing the tools of sustainable financing. In addition to indicating an environmentally responsible

nature, the actual effect of green debt issuance on the shareholder value is positive, and the bigger the instruments are issued, the larger the positive effect on the ROE of the firm issuing them. The positive findings are supported by the fact that there are also positive correlations with the Tobin Q and profitability indicators, which imply that there is a consistent trend in terms of rewarding by the capital markets the implementation of the sustainability principles into the policies of debt financing. Similarly, the recorded correlation between the stock returns and ROE certifies that investors convert the sustainability promises to returns on stock prices, and therefore enhance profits. The positive value of ROA on the inside shows that the effects of operational efficiency on external financing are complementary, which implies that sustainable debt adoption and greater efficiency of the firms have a synergistic relationship. Taken together, the above-mentioned pieces of evidence show that green bonds are a mechanism that can bring environmental goals and corporate finance together and yield certain quantifiable returns. In this regard, the green debt is a potential and value-adding tool along the corporate finance value chain.

In order to maximise the financial gain of green bonds issuance, the firm should implement a well-planned strategy. To begin with, comprehensive reporting of the intended use of the proceeds such as the selection of a project and quantifiable environmental effects increases investor confidence and enhances the potential green premium pricing. Second, by comparing the green debt issuance to the overall corporate sustainability plan, via well-set environmental objectives, increases the credibility and attractiveness to the investors whose decision-making process is based on the ESG. The findings also show that ROE can be maximised by optimising the volume of bond issues but taking into consideration the economies of scale and the absorptive capacity of the financial markets, but the issuers should be fully aware of the balance between the issue volumes to maintain the favourable pricing and demand conditions. In addition, access to independent external appraisers and purchase of third-party checks serve as guarantees of green eligibility, information asymmetry reduction and even reduced cost of capital. Continued observation of the post-issuance financial and environmental performance is also important, and the lessons are to help inform future issuance planning, further involve stakeholders, and strengthen long term increases in profitability.

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