|  | (1)  Ln(Spread) | (2)  Ln(Spread) |
| --- | --- | --- |
| (Intercept) | 8.581\*\*\* | 7.347\*\*\* |
|  | (<0.001) | (<0.001) |
| log\_total\_esg\_score | -0.849\*\*\* | -0.371\*\*\* |
|  | (<0.001) | (<0.001) |
| profitability\_w |  | -0.471\*\*\* |
|  |  | (<0.001) |
| leverage\_w |  | 0.678\*\*\* |
|  |  | (<0.001) |
| log\_size |  | -0.097\*\*\* |
|  |  | (<0.001) |
| industry |  | 0.013\*\*\* |
|  |  | (<0.001) |
| Num.Obs. | 5602 | 5591 |
| R2 | 0.047 | 0.142 |
| R2 Adj. | 0.047 | 0.141 |
| AIC | 9309.8 | 8707.1 |
| BIC | 9323.1 | 8746.9 |
| RMSE | 0.56 | 0.53 |
| Std.Errors | IID | IID |
| * p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01 | | |

The table provides detailed results from regression analyses aimed at understanding the relationship between borrowers' Environmental, Social, and Governance (ESG) scores and loan spreads. The dependent variable in both models is the natural logarithm of loan spreads, which allows for a more nuanced interpretation of the percentage change in spreads relative to changes in ESG scores and other financial variables.

In column (1), the regression focuses solely on the relationship between the ESG score and loan spreads. The coefficient for the log of the total ESG score is -0.849, which is highly significant (p < 0.001). This finding indicates a strong negative relationship between ESG scores and loan spreads, suggesting that as a borrower’s ESG score increases by 1%, the loan spread decreases by approximately 0.849%. This result is consistent with the notion that higher ESG-rated firms may be perceived as less risky by lenders, leading to lower borrowing costs. However, this model only accounts for ESG scores without considering other financial or industry-specific factors that might influence loan spreads.

Column (2) extends the analysis by introducing several control variables, including profitability, leverage, firm size, and industry effects. Even after controlling for these factors, the coefficient for the ESG score remains negative and significant at -0.371 (p < 0.001), though its magnitude is reduced compared to the simple model in column (1). This suggests that while ESG scores do play a role in influencing loan spreads, their impact is less pronounced when other key financial indicators are considered. This finding underscores that ESG considerations, although relevant, are not the sole determinants of loan pricing.

The control variables added in column (2) provide additional insights into how traditional financial metrics influence loan spreads. Profitability, represented by the variable profitability\_w, shows a significant negative relationship with loan spreads, with a coefficient of -0.471 (p < 0.001). This implies that more profitable firms are rewarded with lower loan spreads, likely reflecting their lower perceived credit risk. On the other hand, leverage (leverage\_w) has a significant positive effect on loan spreads, with a coefficient of 0.678 (p < 0.001). This result suggests that firms with higher debt levels are penalized with higher loan spreads, likely due to the increased financial risk associated with higher leverage.

Firm size, captured through the logarithm of size (log\_size), is also significantly negatively related to loan spreads, with a coefficient of -0.097 (p < 0.001). This indicates that larger firms, which are typically viewed as more stable and less risky, tend to secure loans at lower spreads. Additionally, the industry variable exhibits a small but significant positive effect (0.013, p < 0.001), implying that loan spreads vary across different industries, potentially reflecting industry-specific risks or market conditions.

The goodness-of-fit metrics, such as R-squared and adjusted R-squared, increase in column (2), indicating that the inclusion of these control variables improves the model's explanatory power. The lower values of the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) further suggest that the model in column (2) provides a better fit to the data compared to the simpler model in column (1). The Root Mean Square Error (RMSE) also decreases slightly in column (2), indicating improved prediction accuracy.

Overall, these findings highlight that while ESG scores are an important consideration in loan pricing, traditional financial metrics such as profitability, leverage, and firm size remain more influential factors in determining loan spreads. This suggests that while lenders are beginning to integrate ESG factors into their risk assessments, they continue to rely heavily on established financial indicators to guide their pricing decisions. The results align with broader literature that suggests a growing but still limited role for ESG factors in financial decision-making, particularly in contexts like loan pricing where financial risk remains a primary concern for lenders.