|  | (1)  Ln(Spread) | (2)  Ln(Spread) | (3)  Ln(Spread) | (4)  Ln(Spread) | (5)  Ln(Spread) | (6)  Ln(Spread) |
| --- | --- | --- | --- | --- | --- | --- |
| (Intercept) | 7.188\*\*\* | 7.028\*\*\* | 7.094\*\*\* | 6.735\*\*\* | 5.833\*\*\* | 6.036\*\*\* |
|  | (<0.001) | (<0.001) | (<0.001) | (<0.001) | (<0.001) | (<0.001) |
| log\_environment\_score | -0.520\*\*\* | -0.316\*\*\* |  |  |  |  |
|  | (<0.001) | (<0.001) |  |  |  |  |
| profitability\_w |  | -0.514\*\*\* |  | -0.459\*\*\* |  | -0.446\*\*\* |
|  |  | (<0.001) |  | (<0.001) |  | (<0.001) |
| leverage\_w |  | 0.676\*\*\* |  | 0.683\*\*\* |  | 0.705\*\*\* |
|  |  | (<0.001) |  | (<0.001) |  | (<0.001) |
| log\_size |  | -0.089\*\*\* |  | -0.105\*\*\* |  | -0.115\*\*\* |
|  |  | (<0.001) |  | (<0.001) |  | (<0.001) |
| industry |  | 0.014\*\*\* |  | 0.015\*\*\* |  | 0.018\*\*\* |
|  |  | (<0.001) |  | (<0.001) |  | (<0.001) |
| log\_social\_score |  |  | -0.490\*\*\* | -0.207\*\*\* |  |  |
|  |  |  | (<0.001) | (<0.001) |  |  |
| log\_governance\_score |  |  |  |  | -0.167\*\* | -0.015 |
|  |  |  |  |  | (0.016) | (0.819) |
| Num.Obs. | 5144 | 5133 | 5144 | 5133 | 5144 | 5133 |
| R2 | 0.044 | 0.129 | 0.026 | 0.120 | 0.001 | 0.116 |
| R2 Adj. | 0.044 | 0.128 | 0.026 | 0.119 | 0.001 | 0.115 |
| AIC | 8649.7 | 8155.9 | 8748.5 | 8208.5 | 8876.7 | 8231.6 |
| BIC | 8662.8 | 8195.1 | 8761.6 | 8247.8 | 8889.8 | 8270.8 |
| RMSE | 0.56 | 0.53 | 0.57 | 0.54 | 0.57 | 0.54 |
| Std.Errors | IID | IID | IID | IID | IID | IID |
| * p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01 | | | | | | |

The table presents the results of regression analyses that explore the relationship between different components of ESG (Environmental, Social, and Governance) scores and loan spreads, along with other financial variables. The dependent variable across all models is the natural logarithm of loan spreads, which provides a more precise understanding of how percentage changes in the predictors affect the spreads.

In column (1), the analysis focuses on the relationship between the environmental score and loan spreads. The coefficient for the log of the environment score is -0.520, which is highly significant (p < 0.001). This result indicates a strong negative relationship, suggesting that a 1% increase in the environmental score corresponds to a decrease of approximately 0.520% in the loan spread. This implies that firms with higher environmental performance are perceived as less risky by lenders, leading to lower borrowing costs. However, this model is limited to the environmental score without considering other financial or non-financial factors.

Column (2) extends the analysis by including control variables such as profitability, leverage, firm size, and industry effects. The coefficient for the environmental score remains negative and significant, though it is reduced to -0.316 (p < 0.001). This indicates that while environmental factors play a role in loan pricing, their impact is less pronounced when other key financial indicators are considered. The control variables, particularly profitability and leverage, show significant effects on loan spreads. Profitability has a significant negative coefficient of -0.514 (p < 0.001), indicating that more profitable firms enjoy lower loan spreads, while leverage has a significant positive coefficient of 0.676 (p < 0.001), suggesting higher borrowing costs for more leveraged firms.

In the third model, the analysis shifts to the social component of ESG scores. The coefficient for the logarithm of the social score is -0.490, which is highly significant (p < 0.001). This finding suggests that improvements in a firm's social practices are associated with lower loan spreads. This may reflect lenders' perceptions that firms with better social practices face lower reputational and operational risks, thus warranting more favorable loan terms.

Column (4) incorporates the same control variables as in column (2) but focuses on the social score. The coefficient for the social score decreases to -0.207 (p < 0.001) when controls are added, indicating that social factors, while significant, are not as strong a determinant of loan spreads when traditional financial metrics are considered. Profitability and leverage continue to exhibit significant effects on loan spreads, reinforcing their importance in lenders' risk assessments.

The fifth model analyzes the governance component of ESG scores. The coefficient for the governance score is -0.167, significant at the 5% level (p = 0.016). This suggests that better governance practices can lead to lower loan spreads, reflecting the view that strong governance structures reduce the risk of mismanagement and improve firm stability.

In the final model, the analysis includes all control variables and focuses on the governance score. Interestingly, the coefficient for governance is no longer significant, with a value of -0.015 (p = 0.819). This indicates that when profitability, leverage, firm size, and industry effects are taken into account, governance factors alone do not significantly influence loan spreads.

Across all models, the control variables consistently exhibit significant relationships with loan spreads. **Profitability** is negatively related to loan spreads across all models, implying that more profitable firms benefit from lower borrowing costs. **Leverage** has a positive relationship with loan spreads, indicating higher costs for more leveraged firms. **Firm size** also negatively impacts loan spreads, suggesting that larger firms, perceived as more stable, secure loans at lower spreads. The **industry** variable shows small but significant positive effects, indicating some variation in loan spreads across industries.

Goodness-of-fit metrics, such as **R-squared** and **adjusted R-squared**, improve when control variables are included, suggesting that these variables enhance the model's explanatory power. Lower values of the **Akaike Information Criterion (AIC)** and **Bayesian Information Criterion (BIC)** in models with controls also indicate better model fit. The **Root Mean Square Error (RMSE)** remains relatively stable across models, suggesting consistent prediction accuracy.

In conclusion, while ESG components are relevant to loan pricing, traditional financial metrics such as profitability, leverage, and firm size remain more significant determinants of loan spreads. This highlights the ongoing importance of established financial indicators in credit risk assessments, even as lenders begin to integrate ESG factors into their decision-making processes.