|  | (1)  numcov1 | (2)  numcov1 |
| --- | --- | --- |
| (Intercept) | 6.520\*\*\* | 6.415\*\*\* |
|  | (<0.001) | (<0.001) |
| log\_total\_esg\_score | -1.198\*\*\* | -0.714\*\*\* |
|  | (<0.001) | (<0.001) |
| log\_facilityamt |  | -0.019 |
|  |  | (0.137) |
| log\_num\_lenders |  | 0.088\*\*\* |
|  |  | (<0.001) |
| profitability\_w |  | -0.295\*\*\* |
|  |  | (<0.001) |
| leverage\_w |  | 0.002 |
|  |  | (0.972) |
| log\_size |  | -0.183\*\*\* |
|  |  | (<0.001) |
| industry |  | 0.003 |
|  |  | (0.593) |
| Num.Obs. | 2756 | 2750 |
| R2 | 0.072 | 0.192 |
| R2 Adj. | 0.072 | 0.190 |
| AIC | 5090.1 | 4715.0 |
| BIC | 5101.9 | 4762.4 |
| RMSE | 0.61 | 0.57 |
| 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 the number of covenant violations, represented by the variable numcov1. The dependent variable in both models is numcov1, which allows for a clear interpretation of how changes in ESG scores and other financial variables affect covenant violations.

In column (1), the regression focuses primarily on the relationship between the total ESG score and numcov1. The coefficient for the log of the total ESG score is -1.198, which is highly significant (p < 0.001). This finding indicates a strong negative relationship between ESG scores and covenant violations, suggesting that as a borrower’s ESG score increases, the number of covenant violations decreases significantly. This result aligns with the notion that firms with higher ESG scores are perceived as more responsible or lower risk, leading to fewer covenant breaches. However, this model does not account for other financial or industry-specific factors that could also influence covenant violations.

Column (2) extends the analysis by introducing several control variables, including the facility amount, the number of lenders, profitability, leverage, firm size, and industry effects. Even after accounting for these factors, the coefficient for the ESG score remains negative and significant at -0.714 (p < 0.001), though its magnitude is reduced compared to the simpler model in column (1). This suggests that while ESG scores are still influential in reducing covenant violations, their impact is moderated when considering other critical financial indicators. This finding highlights that ESG considerations, although important, are not the sole determinants of covenant performance.

The control variables added in column (2) provide additional insights into how traditional financial metrics influence covenant violations. For example, profitability, represented by profitability\_w, shows a significant negative relationship with numcov1, with a coefficient of -0.295 (p < 0.001). This implies that more profitable firms experience fewer covenant violations, likely due to their stronger financial health and lower perceived risk. The number of lenders (log\_num\_lenders) has a positive and significant effect on numcov1, with a coefficient of 0.088 (p < 0.001), indicating that as the number of lenders increases, the likelihood of covenant violations also increases. This could reflect the complexity and potential misalignment of interests when more lenders are involved. Firm size (log\_size) is significantly negatively related to numcov1, with a coefficient of -0.183 (p < 0.001), indicating that larger firms, typically seen as more stable and less risky, tend to have fewer covenant violations. Other variables such as leverage and industry effects do not show significant relationships in this model.

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

Overall, these findings suggest that while ESG scores are an important factor in predicting covenant violations, traditional financial metrics such as profitability, the number of lenders, and firm size remain crucial determinants. This implies that while lenders and stakeholders may be increasingly considering ESG factors in their risk assessments, conventional financial indicators continue to play a dominant role in evaluating covenant performance. The results align with broader research indicating that ESG factors are becoming more relevant in financial decision-making, but their impact is still secondary to established financial metrics, particularly in contexts like covenant monitoring where financial risk is a primary concern.