

Key Observations:

Class Imbalance: Even after using techniques to balance the data, there are still a lot more non-bankrupt companies ## (1980) compared to bankrupt ones (66).

Model Accuracy: The model's accuracy is 88%, but this might be misleading because of the class imbalance.

Precision and Recall for Bankruptcy Prediction:

Precision: Only 19% of the companies predicted to go bankrupt actually do.

Recall: The model correctly identifies 85% of the bankrupt companies.

F1-Score: The balance between precision and recall is 0.31, which is fairly low.

Insights and Recommendations:

Key Financial Indicators:

Debt Ratio %:

Insight: Higher debt ratios are linked to higher bankruptcy risk.

Action: Keep debt levels sustainable and manage debts carefully.

Net Income to Total Assets:

Insight: Lower profitability relative to total assets increases bankruptcy risk.

Action: Improve profitability through cost management and efficient asset use.

ROA(A) and ROA(B) before Interest and Taxes:

Insight: Lower profitability ratios are associated with higher bankruptcy risk.

Action: Enhance operational efficiency and profitability.

Current Liability to Assets:

Insight: Higher short-term liabilities relative to total assets increase bankruptcy risk.

Action: Manage short-term debts effectively and ensure adequate cash flow.

Recommendations for Financial Risk Management:

Strengthen Financial Health Monitoring:

Regularly check key financial indicators like Debt Ratio %, Net Income to Total Assets, and ROA.

Set limits for these indicators and take action if they exceed safe levels.

Risk Mitigation Strategies:

Develop plans to manage debt during tough times.

Have contingency plans ready for adverse market conditions.

Enhance Financial Forecasting:

Use advanced forecasting techniques to predict financial ratios and bankruptcy risk.

Include scenario analysis to see how different economic conditions affect the business.

Diversification and Revenue Management:

Explore new markets or products to reduce dependence on a single revenue source.

Diversification can protect against market changes or industry challenges.

Continuous Improvement:

Regularly review and adapt financial strategies based on market changes and internal performance.

Foster a culture of continuous improvement within the financial team.

Practical Steps:

Debt Ratio % Management:

Set targets to reduce debt ratios.

Regularly monitor debt levels and take corrective actions.

Improve Net Income to Total Assets:

Analyze costs and identify areas for savings.

Invest in projects that improve asset use and profitability.

Enhance ROA(A) and ROA(B):

Focus on improving operational efficiency.

Regularly review and optimize business processes.

Manage Current Liabilities:

Negotiate better payment terms with suppliers.

Improve cash flow management to meet short-term obligations.

By following these simplified steps and recommendations, you can better manage financial risks and reduce the chances of bankruptcy.