

Data Set Information:

The dataset is about bankruptcy prediction of Polish companies. The data was collected from Emerging Markets Information Service which is a database containing information on emerging markets around the world. The bankrupt companies were analyzed in the period 2000-2012, while the still operating companies were evaluated from 2007 to 2013.

Basing on the collected data five classification cases were distinguished, that depends on the forecasting period:

- 1stYear – the data contains financial rates from 1st year of the forecasting period and corresponding class label that indicates bankruptcy status after 5 years. The data contains 7027 instances (financial statements), 271 represents bankrupted companies, 6756 firms that did not bankrupt in the forecasting period.
- 2ndYear – the data contains financial rates from 2nd year of the forecasting period and corresponding class label that indicates bankruptcy status after 4 years. The data contains 10173 instances (financial statements), 400 represents bankrupted companies, 9773 firms that did not bankrupt in the forecasting period.
- 3rdYear – the data contains financial rates from 3rd year of the forecasting period and corresponding class label that indicates bankruptcy status after 3 years. The data contains 10503 instances (financial statements), 495 represents bankrupted companies, 10008 firms that did not bankrupt in the forecasting period.
- 4thYear – the data contains financial rates from 4th year of the forecasting period and corresponding class label that indicates bankruptcy status after 2 years. The data contains 9792 instances (financial statements), 515 represents bankrupted companies, 9277 firms that did not bankrupt in the forecasting period.
- 5thYear – the data contains financial rates from 5th year of the forecasting period and corresponding class label that indicates bankruptcy status after 1 year. The data contains 5910 instances (financial statements), 410 represents bankrupted companies, 5500 firms that did not bankrupt in the forecasting period.

Attribute Information:

- X1 net profit / total assets
- X2 total liabilities / total assets
- X3 working capital / total assets
- X4 current assets / short-term liabilities
- X5 [(cash + short-term securities + receivables - short-term liabilities) / (operating expenses - depreciation)] * 365
- X6 retained earnings / total assets
- X7 EBIT / total assets
- X8 book value of equity / total liabilities
- X9 sales / total assets
- X10 equity / total assets
- X11 (gross profit + extraordinary items + financial expenses) / total assets
- X12 gross profit / short-term liabilities
- X13 (gross profit + depreciation) / sales
- X14 (gross profit + interest) / total assets
- X15 (total liabilities * 365) / (gross profit + depreciation)
- X16 (gross profit + depreciation) / total liabilities
- X17 total assets / total liabilities
- X18 gross profit / total assets
- X19 gross profit / sales

X20 $(\text{inventory} * 365) / \text{sales}$
X21 $\text{sales}(n) / \text{sales}(n-1)$
X22 $\text{profit on operating activities} / \text{total assets}$
X23 $\text{net profit} / \text{sales}$
X24 $\text{gross profit (in 3 years)} / \text{total assets}$
X25 $(\text{equity} - \text{share capital}) / \text{total assets}$
X26 $(\text{net profit} + \text{depreciation}) / \text{total liabilities}$
X27 $\text{profit on operating activities} / \text{financial expenses}$
X28 $\text{working capital} / \text{fixed assets}$
X29 $\text{logarithm of total assets}$
X30 $(\text{total liabilities} - \text{cash}) / \text{sales}$
X31 $(\text{gross profit} + \text{interest}) / \text{sales}$
X32 $(\text{current liabilities} * 365) / \text{cost of products sold}$
X33 $\text{operating expenses} / \text{short-term liabilities}$
X34 $\text{operating expenses} / \text{total liabilities}$
X35 $\text{profit on sales} / \text{total assets}$
X36 $\text{total sales} / \text{total assets}$
X37 $(\text{current assets} - \text{inventories}) / \text{long-term liabilities}$
X38 $\text{constant capital} / \text{total assets}$
X39 $\text{profit on sales} / \text{sales}$
X40 $(\text{current assets} - \text{inventory} - \text{receivables}) / \text{short-term liabilities}$
X41 $\text{total liabilities} / ((\text{profit on operating activities} + \text{depreciation}) * (12/365))$
X42 $\text{profit on operating activities} / \text{sales}$
X43 $\text{rotation receivables} + \text{inventory turnover in days}$
X44 $(\text{receivables} * 365) / \text{sales}$
X45 $\text{net profit} / \text{inventory}$
X46 $(\text{current assets} - \text{inventory}) / \text{short-term liabilities}$
X47 $(\text{inventory} * 365) / \text{cost of products sold}$
X48 $\text{EBITDA} (\text{profit on operating activities} - \text{depreciation}) / \text{total assets}$
X49 $\text{EBITDA} (\text{profit on operating activities} - \text{depreciation}) / \text{sales}$
X50 $\text{current assets} / \text{total liabilities}$
X51 $\text{short-term liabilities} / \text{total assets}$
X52 $(\text{short-term liabilities} * 365) / \text{cost of products sold}$
X53 $\text{equity} / \text{fixed assets}$
X54 $\text{constant capital} / \text{fixed assets}$
X55 working capital
X56 $(\text{sales} - \text{cost of products sold}) / \text{sales}$
X57 $(\text{current assets} - \text{inventory} - \text{short-term liabilities}) / (\text{sales} - \text{gross profit} - \text{depreciation})$
X58 $\text{total costs} / \text{total sales}$
X59 $\text{long-term liabilities} / \text{equity}$
X60 $\text{sales} / \text{inventory}$
X61 $\text{sales} / \text{receivables}$
X62 $(\text{short-term liabilities} * 365) / \text{sales}$
X63 $\text{sales} / \text{short-term liabilities}$
X64 $\text{sales} / \text{fixed assets}$