**### Data Set Information:**

**\*\*The dataset is about bankruptcy prediction of Polish companies\*\***

The data was collected from Emerging Markets Information Service (EMIS, [Web Link]), 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.

**### Features description**

- 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 (inventory \* 365) / sales

- X21 sales (n) / sales (n-1)

- X22 profit on operating activities / total assets

- X23 net profit / sales

- X24 gross profit (in 3 years) / total assets

- X25 (equity - share capital) / total assets

- X26 (net profit + depreciation) / total liabilities

- X27 profit on operating activities / financial expenses

- X28 working capital / fixed assets

- X29 logarithm of total assets

- X30 (total liabilities - cash) / sales

- X31 (gross profit + interest) / sales

- X32 (current liabilities \* 365) / cost of products sold

- X33 operating expenses / short-term liabilities

- X34 operating expenses / total liabilities

- X35 profit on sales / total assets

- X36 total sales / total assets

- X37 (current assets - inventories) / long-term liabilities

- X38 constant capital / total assets

- X39 profit on sales / sales

- X40 (current assets - inventory - receivables) / short-term liabilities

- X41 total liabilities / ((profit on operating activities + depreciation) \* (12/365))

- X42 profit on operating activities / sales

- X43 rotation receivables + inventory turnover in days

- X44 (receivables \* 365) / sales

- X45 net profit / inventory

- X46 (current assets - inventory) / short-term liabilities

- X47 (inventory \* 365) / cost of products sold

- X48 EBITDA (profit on operating activities - depreciation) / total assets

- X49 EBITDA (profit on operating activities - depreciation) / sales

- X50 current assets / total liabilities

- X51 short-term liabilities / total assets

- X52 (short-term liabilities \* 365) / cost of products sold)

- X53 equity / fixed assets

- X54 constant capital / fixed assets

- X55 working capital

- X56 (sales - cost of products sold) / sales

- X57 (current assets - inventory - short-term liabilities) / (sales - gross profit - depreciation)

- X58 total costs /total sales

- X59 long-term liabilities / equity

- X60 sales / inventory

- X61 sales / receivables

- X62 (short-term liabilities \*365) / sales

- X63 sales / short-term liabilities

- X64 sales / fixed assets

- banrupt – binary classification target. Positive class is bankrupcy