

Project 9

ML Fundamentals and Applications

Team Members

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Feature Description:

- 1) **ROA(C) before interest and depreciation before interest:** Measures the company's ability to generate returns on assets before factoring in interest expenses and depreciation.
- 2) **ROA(A) before interest and % after tax:** Indicates the return on assets before interest, with a focus on profitability after tax.
- 3) **ROA(B) before interest and depreciation after tax:** Reflects the company's return on assets before interest and depreciation, but after accounting for taxes.
- 4) **Operating Gross Margin:** Represents the percentage of revenue remaining after covering direct production costs, excluding operating expenses and taxes.
- 5) **Realized Sales Gross Margin:** Measures the percentage of gross profit generated from actual sales, excluding unsold or unrealized revenues.
- 6) **Operating Profit Rate:** Shows the ratio of a company's operating profit to its revenue, highlighting operational efficiency.
- 7) **Pre-tax net Interest Rate:** Indicates the interest rate paid on the company's debt before taxes.
- 8) **After-tax net Interest Rate:** Reflects the interest rate paid on the company's debt after accounting for taxes.

- 9) **Non-industry income and expenditure/revenue:** Measures the proportion of a company's income or expenses that are not related to its core industry operations.
- 10) **Continuous interest rate (after tax):** Represents the ongoing interest rate after taxes, applied to the company's long-term debt.
- 11) **Operating Expense Rate:** Indicates the percentage of revenue spent on operating expenses, reflecting the efficiency of the company's operational management.
- 12) **Research and development expense rate:** Shows the proportion of revenue allocated to research and development to foster innovation.
- 13) **Cash flow rate:** Measures the efficiency of the company in generating cash flow from its operations, compared to its revenue or assets.
- 14) **Interest-bearing debt interest rate:** Reflects the interest rate on the company's debt that is subject to interest payments.
- 15) **Tax rate (A):** Represents the percentage of taxes the company must pay relative to its taxable income.
- 16) **Net Value Per Share (B):** Calculates the net value per share, reflecting the value available to shareholders after liabilities are subtracted from assets.
- 17) **Net Value Per Share (A):** Similar to Net Value Per Share (B), this is the calculated value per share but may use a different method for determining assets and liabilities.
- 18) **Net Value Per Share (C):** A variant of the Net Value Per Share metrics that uses different valuation assumptions for calculating shareholder value.

- 19) **Persistent EPS in the Last Four Seasons:** Tracks the earnings per share over the last four seasons, offering insight into consistent profitability.
- 20) **Cash Flow Per Share:** Measures the amount of cash generated per share available to the company's investors.
- 21) **Revenue Per Share (Yuan ¥):** Represents the total revenue generated by the company, divided by the number of outstanding shares.
- 22) **Operating Profit Per Share (Yuan ¥):** Shows the operating profit generated for each share, reflecting operational efficiency.
- 23) **Per Share Net Profit Before Tax (Yuan ¥):** Represents the net profit per share before tax, indicating the company's profitability on a per-share basis.
- 24) **Realized Sales Gross Profit Growth Rate:** Measures the rate of growth in gross profit from actual sales over a period.
- 25) **Operating Profit Growth Rate:** Tracks the growth rate of operating profit, indicating how well the company is managing its operational efficiency.
- 26) **After-tax Net Profit Growth Rate:** Shows the growth rate of the company's net profit after taxes, highlighting post-tax profitability.
- 27) **Regular Net Profit Growth Rate:** Tracks the growth rate in net profit, excluding any one-time or irregular gains or losses.
- 28) **Continuous Net Profit Growth Rate:** Indicates the sustained growth rate of net profit over multiple periods, providing insight into long-term profitability.
- 29) **Total Asset Growth Rate:** Measures the rate at which the company's total assets have increased over a given period, indicating its expansion.

- 30) **Net Value Growth Rate:** Reflects the growth in the company's net value, taking into account changes in assets and liabilities.
- 31) **Total Asset Return Growth Rate Ratio:** Indicates the growth ratio of returns generated from total assets, showing the efficiency of asset use.
- 32) **Cash Reinvestment %:** Shows the percentage of net cash flows reinvested back into the business to fund growth.
- 33) **Current Ratio:** Measures the company's ability to pay off short-term liabilities with its current assets (assets expected to be liquid in less than a year).
- 34) **Quick Ratio:** A more conservative measure of the current ratio, excluding inventory from current assets to assess immediate liquidity.
- 35) **Interest Expense Ratio:** Reflects the proportion of interest expenses to the company's earnings or revenue, assessing debt burden.
- 36) **Total Debt/Total Net Worth:** Indicates the proportion of debt relative to the company's net worth, reflecting leverage.
- 37) **Debt Ratio %:** Represents the percentage of the company's total assets financed by debt, showing financial leverage.
- 38) **Net Worth/Assets:** Measures the proportion of the company's equity relative to its total assets, showing the ownership stake.
- 39) **Long-term Fund Suitability Ratio (A):** Evaluates the proportion of long-term funds available to support long-term investments.
- 40) **Borrowing Dependency:** Reflects how much the company relies on borrowing to finance its operations and investments.
- 41) **Contingent Liabilities/Net Worth:** Measures the potential future obligations (contingent liabilities) relative to net worth, assessing

financial risk.

- 42) **Operating Profit/Paid-in Capital:** Indicates how effectively the company generates operating profits from its paid-in capital.
- 43) **Net Profit Before Tax/Paid-in Capital:** Measures the pre-tax net profit generated relative to the paid-in capital, assessing profitability.
- 44) **Inventory and Accounts Receivable/Net Value:** Shows the proportion of inventory and accounts receivable relative to the company's net value.
- 45) **Total Asset Turnover:** Indicates the efficiency with which the company generates revenue from its total assets.
- 46) **Accounts Receivable Turnover:** Measures how often the company collects its receivables within a period, reflecting liquidity.
- 47) **Average Collection Days:** Indicates the average number of days it takes for the company to collect receivables.
- 48) **Inventory Turnover Rate (times):** Measures how often the company sells and replaces its inventory over a period.
- 49) **Fixed Assets Turnover Frequency:** Reflects the number of times the company uses its fixed assets to generate revenue.
- 50) **Net Worth Turnover Rate (times):** Indicates how efficiently the company generates revenue relative to its net worth.
- 51) **Revenue per Person:** Measures the revenue generated per employee, assessing workforce productivity.
- 52) **Operating Profit per Person:** Reflects the operating profit generated per employee, indicating operational efficiency.

- 53) **Allocation Rate per Person:** Measures the resource allocation efficiency on a per-employee basis.
- 54) **Working Capital to Total Assets:** Shows the proportion of working capital (short-term liquidity) relative to total assets.
- 55) **Quick Assets/Total Assets:** Measures the proportion of quick assets (liquid assets) relative to total assets.
- 56) **Current Assets/Total Assets:** Represents the proportion of current assets (short-term assets) relative to total assets.
- 57) **Cash/Total Assets:** Indicates the proportion of cash within the company's total assets, reflecting liquidity.
- 58) **Quick Assets/Current Liability:** Measures the ability of quick assets to cover current liabilities.
- 59) **Cash/Current Liability:** Reflects the company's ability to cover short-term liabilities with cash.
- 60) **Current Liability to Assets:** Indicates the proportion of current liabilities relative to total assets, assessing short-term debt load.
- 61) **Operating Funds to Liability:** Measures how much of the company's operating funds are available to cover liabilities.
- 62) **Inventory/Working Capital:** Reflects the inventory held relative to the working capital, showing liquidity and inventory management.
- 63) **Inventory/Current Liability:** Measures the proportion of inventory relative to current liabilities, indicating short-term asset liquidity.
- 64) **Current Liabilities/Liability:** Shows the proportion of current liabilities to total liabilities, reflecting short-term debt structure.

- 65) **Working Capital/Equity:** Measures the proportion of working capital relative to equity, indicating liquidity relative to equity.
- 66) **Current Liabilities/Equity:** Reflects the company's short-term debt in relation to equity, showing leverage.
- 67) **Long-term Liability to Current Assets:** Measures how much of the company's long-term liabilities are covered by current assets.
- 68) **Retained Earnings to Total Assets:** Indicates the proportion of retained earnings relative to total assets, reflecting reinvested profits.
- 69) **Total Income/Total Expense:** Shows the ratio of income to expenses, indicating profitability.
- 70) **Total Expense/Assets:** Measures the company's total expenses relative to assets, assessing operational cost efficiency.
- 71) **Current Asset Turnover Rate:** Measures how efficiently the company uses its current assets to generate revenue.
- 72) **Quick Asset Turnover Rate:** Indicates the efficiency of quick assets in generating revenue.
- 73) **Working Capital Turnover Rate:** Measures the efficiency with which a company uses its working capital to generate revenue.
- 74) **Cash Turnover Rate:** Indicates how efficiently the company uses cash to generate revenue.
- 75) **Cash Flow to Sales:** Measures how much cash flow is generated for each unit of sales, assessing liquidity.
- 76) **Fixed Assets to Assets:** Represents the proportion of fixed assets relative to total assets, indicating the company's reliance on fixed assets.

- 77) **Current Liability to Liability:** Reflects the proportion of current liabilities to the company's total liabilities.
- 78) **Current Liability to Equity:** Indicates the level of current liabilities in relation to equity.
- 79) **Equity to Long-term Liability:** Measures the ratio of equity relative to long-term liabilities, indicating capital structure.
- 80) **Cash Flow to Total Assets:** Measures the company's cash flow relative to its total assets, indicating asset efficiency.
- 81) **Cash Flow to Liability:** Indicates the company's ability to cover liabilities with cash flow.
- 82) **CFO to Assets:** Measures the company's cash flow from operations relative to its assets.
- 83) **Cash Flow to Equity:** Reflects how much cash flow is available to equity holders after operations and debt payments.
- 84) **Current Liability to Current Assets:** Measures the company's ability to cover current liabilities with current assets.
- 85) **Liability-Assets Flag:** Indicates whether the company's liabilities exceed its assets, signaling financial risk.
- 86) **Net Income to Total Assets:** Shows the return on total assets after net income, reflecting asset efficiency.
- 87) **Total Assets to GNP Price:** Compares the company's total assets to Gross National Product (GNP) price to evaluate relative asset scale.
- 88) **No-credit Interval:** Indicates the average number of days the company can operate without extending credit.

89) **Gross Profit to Sales:** Shows the gross profit margin as a percentage of sales, indicating profit generation capacity.

90) **Net Income to Stockholder's Equity:** Measures the return on equity (ROE), showing the company's profitability for its equity investors.

91) **Liability to Equity:** Reflects the company's leverage ratio, indicating how much of the company's capital comes from debt.

92) **Degree of Financial Leverage (DFL):** Measures the impact of financial leverage on earnings relative to changes in operating income.

93) **Interest Coverage Ratio (Interest expense to EBIT):** Indicates how easily the company can cover its interest expenses with operating profit (EBIT).

94) **Net Income Flag:** Represents whether the company has generated positive or negative net income during the period.

95) **Equity to Liability:** Measures the proportion of equity in relation to liabilities, indicating financial stability.