

# The Influence of Financial Ratios and Intellectual Capital on Financial Difficulties in Construction Companies

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**Abstract.** The research aims to investigate the influence and relationship of financial ratios with the liquidity ratio indicators, leverage, profitability, activity, growth, and intellectual capital indicators with Human Capital, Structure Capital, and Customer Capital on financial difficulties (financial distress) with cash flow analysis indicators, corporate strategy, financial statements on construction companies. The research was conducted in Sengkang, Wajo District, South Sulawesi using non-probability sampling and purposive sampling. The data analysis technique used is double linear regression analysis. The results of the research findings proved that both simultaneous and partial intellectual ratios of the financial and capital have no significant effect on financial difficulties. In comparison, the correlation analysis shows the ratio of financial and intellectual capital simultaneously not significant to financial distress or negative relation where the greater the variable of financial and intellectual capital ratio, the greater the decrease in the value of variables of financial difficulties.

**Keywords:** *financial ratio, Intellectual capital, financial distress*

## INTRODUCTION

Increased financial performance in developing a company can be done by maximizing the potential of its resources and performing effectively and efficiently to avoid a situation that could lead to financial difficulties or even bankruptcy. If those unexpected situations happen, it could affect the owner and all parties associated with the company, such as investors, creditors, suppliers, consumers, employees, and the government [1].

The management of the company needs to analyze the financial performance periodically to obtain realistic information so that the company can take precautions before the larger problems appear. The precautions could be in the forms of restructuring debts, reducing production costs and

employees, doing mergers with other companies, being taken over, or selling certain assets to maintain company existence [2].

In keeping the company's performance, financial statements are indispensable to provide information about the state of the company's financial performance that has been achieved periodically. The analysis used to promote financial difficulties is the analysis of financial ratios as measuring instruments and media that can demonstrate actual financial performance [1].

The financial situation of the company should be supervised carefully to avoid inefficient and ineffective use, which could cause problems. The financial condition of the company needs to be maintained because it relates to partners and the government. Financial ratios consist of liquidity ratio, leverage, profitability, activity, and growth [1].

While keeping the company in maximizing the effectiveness and efficiency in achieving goals that have been planned, it is also necessary to develop invisible resources through increased knowledge, competence, creativity, innovation, integrity, and patterns. In addition, building a good relationship between employees and the company, known as the Capital Confidential, consisting of human capital, structural capital, and relational capital [3].

Some of these factors require strategic management in determining the best solution to avoid financial difficulties. Therefore, the researchers investigate the extent of "the **influence of financial ratios and Intellectual Capital to financial difficulties (financial distress) in the company**" in which the impacts could maintain the sustainability of financial performance and corporate productivity, and also as precautions before any problems occur in the company.

To maintain operational sustainability, a company should have bargaining power as a business. Maximizing the company's value equals to maximizing the main purpose of the enterprise, which is maintaining the financial performance of the company by ensuring the risk management as a control function [1], [4], [5].

Research in organizing instruments require indicators and parameters such as liquidity ratio, leverage, profitability, activity, and growth. Several research results showed that financial ratios could be useful for predicting financial difficulties or corporate bankruptcy with a predicted bankruptcy rate of 94% and 95% for reference in the research to be conducted [1], [5].

Liquidity ratios measure the company's ability to pay short-term debt and pay on time. The liquidity characteristics of a company are healthy if it has funds greater than its obligations [1], [6].

The leverage or solvency ratio measures the extent to which the company's ability to pay for the principal and interest of long-term loans. If the company's management exceeds the debts over the available funding, the company's operations could cause problems in the future loan payment that can trigger financial difficulties [1], [2], [6].

The ratio of profitability (ROE) can reveal the effectiveness of corporate management in running its business. ROE can also be used as a benchmark to evaluate the success of the business, which demonstrates the ability of the company to generate profit. Thus, it can increase the company's productivity because the existence of a company is based on the strength of assets in generating income [1], [2].

The ratio of activity is the optimal use of the company's wealth to achieve the target. The fast turnover would increase the productivity of the company, in which the work carried out can be completed on time and give profit to the company, while at the same time maintain the trust from partners [1].

The growth ratio is a ratio that describes the ability of the company to maintain its economic position amid economic sector growth. The growth ratio in this study is measured by sales growth. Sales growth reflects the successful implementation of the company's investments in the past and can be used as a prediction for the company's future growth [1].

Intellectual Capital (IC) is related to the development of human resources to strive for any pre-planned goals. In this study, human capital, structural capital, and relational capital variables were added as indicators in measuring organizational relationships to see the extent of the influence and relationship of resources with financial management so that the company's performance is maintained and avoiding difficulties [7], [8].

Human Capital (HC) is the most important component in a company because it is a resource that includes knowledge, skills, and combinations possessed by the employees [8], [9].

Structural Capital (SC) is the company's ability to create conditions desired by employees, and to promote available potentialsto create a corporate culture in fulfilling the company's activity processes through recruitment and training employees to work with each other in realizing and determining the goalsset by the company [8], [10].

Relational Capital (RC) or Customer Capital (CC) is the company's ability to maintain good relations with its network, including suppliers, investors, creditors, or other parties cooperated with the company [8]

Limitations of financial hardship are the company's crisis conditions due to its inability to pay financial obligations at the due date. If the condition lasts for the long-term, it could lead to bankruptcy. Variables that can indicate the state of financial difficulty are cash flow, corporate strategy, and financial statements, [1], [6], [11], [12], [13].

Cash flow analysis is a statement of cash flows reporting the company's cash flows in the current period as well as describing future cash flows. The difficulty of cash flows is due to the disbalance between the flow of money and the expenditure for spending and the error of the management of cash flows (Chas Flow) in financing the company's operations [14].

The company's strategic analysis is a series of decisions and managerial actions that determine the company's performance. It emphasizes on the observation and evaluation with the principle of transparency, accountability, value for money, and environmental threats by looking at the strengths and weaknesses of the company in the form of risk management implementation [13], [14], [15].

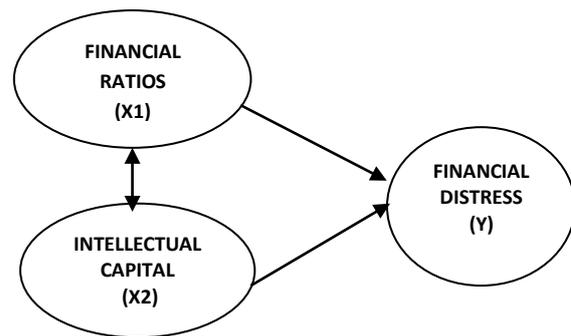


Figure 1. Conceptual framework of research  
Source: From theoretical and empirical studies

A financial report is the management's responsibility to give financial information to those who have instilled some funds into the company. The financial statements cover the results of a balanced report, cash flow, profit or loss, and equity changes that can

provide information about the current condition of the company [16].

Based on theoretical and empirical studies, conceptual frameworks among the variable relationships can be described as in Figure 1.

**METHOD**

The current research used associative quantitative research to identify the influence and the relationship between two or more variables, while the data collection was conducted using interviews and questionnaires. The research is located in the village of Tempe District Wajo Regency of South Sulawesi. The research population is a medium-sized company engaged in construction or contracting selected using nonprobability sampling using the purposive sampling technique, which is an unrandomized sample selection technique with information obtained from 10 companies.

**RESULT & DISCUSSION**

After going through several tests, the results can be concisely described as in Table 1.

Table 1. Regression Equation

| Regression equation                             |                             |            |                           |        |      |
|---|-----------------------------|------------|---------------------------|--------|------|
| Double Linear regression analysis Results table |                             |            |                           |        |      |
| Coefficients <sup>a</sup>                       |                             |            |                           |        |      |
| Model   | Unstandardized Coefficients |            | Standardized Coefficients |        |      |
|   | B                           | Std. Error | Beta                      | Q      | Sig. |
| 1 Constant                                      | 10.537                      | 1.810      |                           | 5.821  | .001 |
| R. FINANCE (X1)                                 | -,068                       | ,065       | -,381                     | -1.037 | ,334 |
| M. INTELLECTUAL (X2)                            | -,117                       | ,149       | -,288                     | -,785  | ,458 |

Based on data analysis through SPSS, it can be seen a constant value of 10.537 with an interpretation that the financial ratio and intellectual capital value is 0, the financial difficulties value is 10.537, so the regression equation acquired  $Y' = a + b_1X_1 + b_2X_2$ ;  $Y' = 10.537 - 0,068X_1 - 0,117X_2$ . From the table above, the regression coefficient of a financial ratio is -0.068, and an intellectual capital ratio is -0.068. In this research, both financial ratios and intellectual capital variables have a coefficient of negative value, meaning that the negative relationship occurs. In other words, the greater the financial and intellectual ratio, the greater the decrease in the value of the financial difficulties variable.

**Double correlation Analysis (R)**

Based on the Table 2, it is obtained R number of 0.396. It indicates that the link between the

financial ratios and intellectual capital is simultaneously difficult, which is closer to the value of 0, and the lower relationship is the opposite.

Table 2. Double Correlation Analysis Results

| Model        | Model Summary <sup>b</sup> |          |                   | Std. Error of the Estimate |
|--------------|----------------------------|----------|-------------------|----------------------------|
|              | R                          | R Square | Adjusted R Square |                            |
| 1 dimension0 | ,396 <sup>a</sup>          | ,156     | -,085             | ,32974                     |

**Analysis of Determinations (R<sup>2</sup>)**

Based on the table above (Model Summary), it was obtained R<sup>2</sup> (r Square) at 0.156 or (15.6%). It can be interpreted that the donation percentage influences the variable effect of the financial ratios and intellectual capital simultaneously on variables of the financial difficulties of 0.156 or 15.6%. While 84.4% is influenced by other variables not included in this study, meaning that the low influence of the variable donation percentage of the financial ratio and intellectual capital simultaneously to the variable financial difficulties (not significant). In other words, the closer the value to 0, the more influence that occurs, or vice versa.

**Test Coefficient of Regression Together (Test F)**

From the output of the regression analysis, it can be known the F values as in the following table:

Table 3. F test Result

| ANOVA <sup>b</sup> |                |    |             |      |                   |
|--------------------|----------------|----|-------------|------|-------------------|
| Model              | Sum of Squares | Df | Mean Square | F    | Sig.              |
| 1 Regression       | ,141           | 2  | ,071        | ,649 | ,551 <sup>a</sup> |
| Residual           | ,761           | 7  | ,109        |      |                   |
| Total              | ,902           | 9  |             |      |                   |

Based on table 3, the Anova t count F = 0.649, at the significance of  $\alpha = 5\%$ . Based on the criteria, Ho is accepted when F count < F table, t table = 4.1028, and the interpretation of the Compare F count with F table. The value of F count < F table (0,649 < 4.1028), then Ho is accepted. It can be explained that there is no significant effect between financial ratios and intellectual capital against financial difficulties.

**Partial Regression Coefficient Test (Test T)**

**The variable regression coefficient of the financial ratios test**

Based on the table coefficient above, t count = -0.1037, on the significance of  $\alpha = 5\%$ , t table = 2.20499. The Ho test criteria are Ho is accepted if

T table < T count < T table, and  $H_0$  is rejected if T count < -t table or T count > t table, then compare T count with T table. As can be seen from the table, T-value count < T table (-1.037 < 2.20499) then  $H_0$  is accepted. If  $H_0$  is accepted, it means that there is no significant effect between the financial ratio and financial difficulties.

### Testing of variable regression coefficient of intellectual capital

Based on the table, coefficient t count = (-0,785), at the significance of  $\alpha = 5\%$ , t table = 2.365,  $H_0$  criteria is accepted if -t table  $\leq$  t count  $\leq$  t, and  $H_0$  is rejected if -T count < -t table or T count > t table, then compare T count with T table. From the table, the T count > t Table (-0,785 < 2.365), thus  $H_0$  is accepted, meaning that financial ratio did not significantly influence the intellectual capital of financial difficulties.

The results of the study show that the intellectual ratio and the intellectual capital have negative influences on the difficulties in construction companies at Wajo district. The greater the ratio will decrease the value of financial difficulties. It also indicates the contribution percentage of 15.6 from the influence of independent variables (financial ratio and intellectual capital) to the dependent variable. Therefore, the company management needs to improve its financial performance to maximize the effectiveness and efficiency of companies to avoid financial difficulties.

### CONCLUSION

Based on the results of the research findings and data analysis, the current study draws the following conclusions:

1. The coefficient of negative value means that there is a negative relationship between the financial ratio and intellectual capital variable to the financial difficulties variable. The increase of the financial ratios and intellectual capital variables will decrease the value of the distress financial variable.
2. The low relationship (insignificant) between the financial ratio and the intellectual capital could lead to financial difficulties due to the R-value is 0.396.
3. The low influence of the variable donation percentage on independent financial ratio and intellectual capital to dependent variables (financial difficulties), where the number  $R^2$  (r Square) amounted to 0.156 or (15.6%).
4. The financial ratio of intellectual and capital is not a simultaneous influence which affects the financial difficulties in the construction company in Wajo District, because of F count < f table (0,649 < 4.1028).
5. Partial financial ratios and intellectual capital do not affect the financial difficulties in the company's construction in Wajo District. It is due to the value of T counts < T table.

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