

Influence of Intellectual Capital on Financial Distress in Retail Sub-Sector Companies on Indonesia Stock Exchange

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Abstract

The purpose of this study is to examine: 1. The overview of intellectual capital and financial distress in retail sub-sector companies listed on the Indonesia Stock Exchange. 2. The influence of intellectual capital on financial distress in retail sub-sector companies listed on the Indonesia Stock Exchange. This study employs a library research design and uses data from all retail sub-sector companies on the Indonesia Stock Exchange on December 31, 2022. The study applies qualitative and quantitative descriptive analysis with purposive sampling techniques. Methods used for data analysis and testing include hypothesis testing, correlation and determination coefficients, simple linear regression analysis, and classical assumption tests. The study draws two main conclusions: 1. Intellectual capital and financial distress fluctuate and tend to decline over time. 2. According to the simple linear regression analysis, intellectual capital has a positive but insignificant effect on financial distress. The coefficient of determination test results indicate that intellectual capital contributes only a small portion to financial distress. The correlation coefficient test results show a very weak relationship between intellectual capital and financial distress.

Keywords: *Intellectual Capital; Financial Distress*

1. INTRODUCTION

Financial distress can be affected by several factors, one of these is intellectual capital. Intellectual capital is an intangible asset derived from human resources, characterized by its dynamic nature and its tendency to change according to different conditions and situations. The method used to count intellectual capital is the Value Added Intellectual Coefficient (VAIC). This method is chosen because the data required can be easily obtained from a wide range of companies and sources.

Retail sub-sector companies are one of the categories within the trading, services, and investment sectors on the Indonesia Stock Exchange (IDX) that have the potential for growth and development. These companies operate in the trading sector, where goods are sold directly to end consumers. This activity involves buying and selling to consumers on a small or retail scale, so the companies focus on customer satisfaction and efficient inventory

management.

The following data presents an overview of intellectual capital using the VAIC method, and financial distress using the Springate Score (S-Score) method for retail sub-sector companies listed on the Indonesia Stock Exchange for the period 2018-2022.

Table 1. Intellectual Capital and Financial Distress in Retail Sub-Sector Companies

Year	Intellectual Capital VAIC (times)	Financial Distress S-Score (times)
2018	1,0774	1,0918
2019	-4,0103	1,2047
2020	1,7773	0,9630
2021	1,6191	0,3655
2022	-3,3252	0,5980
Average	-0,5724	0,8446

Source: Indonesia Stock Exchange (data processed, 2024)

Intellectual capital, calculated using

the VAIC, and financial distress, measured using the S-Score, both experienced fluctuations and a general decline. In 2021, both the Value Added Intellectual Coefficient and the S-Score decreased simultaneously. This finding contradicts the results of research performed by Ardalan and Askarian (2014), Nazaruddin and Daulay (2019), Purba (2019), Mulyatiningsih and Atiningsih (2021), and Ramadanty and Khomsiyah (2022), which indicate that intellectual capital has a negative effect on financial distress.

Based on the background of the problem and the various studies mentioned, the author is interested in conducting research on retail sub-sector companies listed on the Indonesia Stock Exchange.

2. LITERATURE REVIEW

2.1 Management

Looking to Ismainar (2015), management is defined as a process involving more than one person to organize the activities of others to achieve desirable outcomes, and it cannot be done alone.

2.2 Financial Management

Musthafa (2017) defines financial management as a field of knowledge that is both enjoyable and challenging. It offers opportunities for employment in various sectors, including corporate finance, banking, real estate, insurance companies, and even other government sectors.

2.3 Intellectual Capital

Silalahi (2021) describes intellectual capital as an intangible asset consisting of organizational resources and knowledge that functions to enhance competitive ability and improve company performance.

2.4 Financial Distress

Sudana (2015) describes financial distress as a condition in which a company's cash flow is inadequate to meet its immediate financial obligations, forcing the company to take corrective measures to enhance its operational efficiency and restore financial stability. In such situations, the company must implement strategic steps to improve its performance and ensure that it can continue to

meet its liabilities in the future.

2.5 Influence of Intellectual Capital on Financial Distress

Research by Ardalan and Askarian (2014), Nazaruddin and Daulay (2019), Purba (2019), Mulyatiningsih and Atiningsih (2021), and Ramadanty and Khomsiyah (2022) indicates that intellectual capital has a negative effect on financial distress.

3. RESEARCH METHOD

The study site consists of retail sub-sector companies listed on the Indonesia Stock Exchange (IDX), accessed through the IDX headquarters located at Jl. Jendral Sudirman Kav. 52-53, South Jakarta 12190, Indonesia.

3.1 Population

The population used in this study is all Retail Trade Sub-Sector Companies Listed on the Indonesia Stock Exchange as of December 31, 2022. The Companies are in total 27.

3.2 Sample

The sample for this study includes:

Table 2. Research Site

No	Issuer Code	Company Name
1	DAYA	PT Duta Intidaya Tbk
2	HERO	PT Hero Supermarket Tbk
3	KOIN	PT Kokoh Inti Arebama Tbk
4	MKNT	PT Mitra Komunikasi Nusantara Tbk
5	MPPA	PT Matahari Putra Prima Tbk
6	SONA	PT Sona Topas Tourism Industry Tbk

Source: www.lembarsaham.com (2024)

Data for the study were collected through interviews, documentation, and questionnaires. Data analysis includes tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. Both quantitative and qualitative descriptive analyses were performed on the collected data.

4. RESULTS AND DISCUSSION

4.1 Result

Table 3. Intellectual Capital Measured by the VAIC

Issure Code	2018	2019	2020	2021	2022	Rata-Rata
DAYA	1,5751	2,1343	1,9003	6,3526	-20,0113	-1,6098
HERO	1,2105	1,2364	-0,3142	-13,0658	1,5487	-1,8769
KOIN	1,4121	1,0459	1,8339	1,4326	-3,4707	0,4507
MKNT	0,6530	-7,3859	7,5153	10,2554	6,2936	3,4663
MPPA	-1,5394	-23,3577	-1,7578	2,2616	-1,5284	-5,1843
SONA	3,1531	2,2649	1,4862	2,4779	-2,7831	1,3198
Average per Year	1,0774	-4,0103	1,7773	1,6191	-3,3252	-0,5724
Minimum Value						-23,3577
Maksimum Value						10,2554

Source: Data processed (2024)

The average intellectual capital value, as measured by the VAIC method for companies in this sector, has exhibited noticeable fluctuations and generally tends to decrease over time. This downward trend is largely due to the companies' inability to effectively manage key components of intellectual capital, such as human capital, structural capital, and relational capital. Specifically, the average VAIC value during the 2018 to 2022 period is recorded at -0.5724. This negative figure indicates that the intellectual capital performance of these companies was not only suboptimal but actually detrimental, with a performance rate of -0.5724 times over the period, reflecting inefficiencies in leveraging their intangible assets for competitive advantage.

For this model of companies, those with the VAIC score below the average include PT Duta Intidaya Tbk, PT Hero Supermarket Tbk, and PT Matahari Putra Prima Tbk. These companies have demonstrated weaker intellectual capital performance. On the other hand, PT Kokoh Inti Arebama Tbk, PT Mitra Komunikasi Nusantara Tbk, and PT Sona Topas Tourism Industry Tbk have managed to achieve VAIC scores above the average, indicating better management and utilization of their intellectual capital in driving business performance. This distinction highlights variations in how companies are able to leverage their intangible resources for value creation.

The minimum score of the Value Added Intellectual Coefficient is -23.3577, observed at PT Matahari Putra Prima Tbk in 2019. This indicates that the performance of intellectual capital at PT Matahari Putra Prima Tbk in 2019 was -23.3577 times. This situation at PT Matahari Putra Prima Tbk occurred because the company was unable to effectively manage its capital employed or relational capital. Capital employed includes harmonious relationships with external parties such as suppliers, customers, the local community, and the government.

The maximum score of the Value Added Intellectual Coefficient is 10.2554 times which is found in PT Mitra Komunikasi Nusantara Tbk in 2021. This means that the company's intellectual capital performance at PT Mitra Komunikasi Nusantara Tbk in 2021 is 10.2554 times. This shows that the company is able to manage structural capital well so that the intellectual capital performance of the company PT Mitra Komunikasi Nusantara Tbk in 2021 is 10.2554 times. Structural capital consists of the company's internal processes and routines, systems, databases and corporate culture in producing optimal intellectual performance and overall business performance.

4.1.1 Analysis of Financial Distress

Table 4. Overview of Financial Distress as measured by the Springate Score

Issure Code	2018	2019	2020	2021	2022	Rata-Rata
DAYA	0,6746	0,5890	0,1029	0,1815	0,3090	0,3714
HERO	0,5001	0,8768	0,1681	-0,3194	0,0422	0,2536
KOIN	0,8864	0,9826	1,0967	0,9027	0,7931	0,9323
MKNT	2,4300	2,4648	2,9074	1,9160	2,0146	2,3466
MPPA	0,1666	0,4641	0,0759	0,3182	0,2258	0,2501
SONA	1,8930	1,8507	1,4267	-0,8060	0,2031	0,9135
Rata-Rata Per Tahun	1,0918	1,2047	0,9630	0,3655	0,5980	0,8446
Minimum Value						-0,8060
Maksimum Value						2,9074

Source: Data processed (2024)

Table 5. Springate Score Zone in Retail Trading Sub-Sector Companies

Issure Code	Average S-Score of each Company	Zona
DAYA	0,3714	potentially bankrupt

HERO	0,2536	potentially bankrupt
KOIN	0,9323	Safe
MKNT	2,3466	Safe
MPPA	0,2501	potentially bankrupt
SONA	0,9135	Safe
Average score	0,8446	potentially bankrupt

Source: Data processed (2024)

The average financial distress score, as measured by the Springate Score method for these companies, showed fluctuations and a general downward trend. This decline can be attributed to a reduction in key financial indicators such as total assets, operating profit, pre-tax profit, and overall sales. As these metrics weakened, the financial health of the companies deteriorated, signaling increased vulnerability to financial distress during the assessed period.

The average financial distress score, as measured by the Springate Score method for these companies, showed fluctuations and a general downward trend. This decline can be attributed to a reduction in key financial indicators such as total assets, operating profit, pre-tax profit, and overall sales. As these metrics weakened, the financial health of the companies deteriorated, signaling increased vulnerability to financial distress during the assessed period.

Table 6. Springate Score Zone in Retail Trading Sub-Sector Companies

Issure Code	2018	2019	2020	2021	2022	Rata-Rata
DAYA	1,5205	3,3050	4,8974	8,5787	19,1978	7,4998
HERO	0,6093	0,8512	1,6087	6,1794	6,3663	3,0830
KOIN	7,3001	6,5829	4,3387	9,8488	41,4795	13,9100
MKNT	2,1085	5,5951	10,8864	21,7413	-13,6441	5,2930
MPPA	3,1841	6,1998	23,4162	6,9576	21,7981	12,3112
SONA	0,6413	0,3328	0,2138	0,1420	0,6254	0,3911
Rata-Rata Per Tahun	2,5603	3,7778	7,5235	8,9080	12,6371	7,0814
Minimum Value						-13,6441
Maximum Value						41,4795

Source: Data processed (2024)

The Lowest value of the Springate Score is -0.8060 which is found in PT Sona Topas Tourism Industry Tbk in 2021. This means that the company in 2021 is in a zone of potential

bankruptcy or experiencing financial distress. The cause of this at PT Sona Topas Tourism Industry Tbk in 2021 is because the company experienced a loss before tax so that the company could not pay off current debts. The loss before tax was due to a decrease in other income which caused profit before tax to be negative.

The maximum value of Springate Score of 2.9074 was found in PT Mitra Komunikasi Nusantara Tbk in 2020. This means that the company in 2020 was in a healthy zone or had no potential for financial distress. This is because business expenses decreased so that the company's pre-tax loss also decreased. The decrease in business expenses is because the company can streamline business expenses in the company.

4.1.2 Analysis of Regression

A simple linear regression analysis is applied to assess the impact of the independent variable on the dependent variable. In this case, intellectual capital serves as the independent variable, and financial distress acts as the dependent variable. To conduct the analysis, SPSS version 21 is utilized, and the results of this test can be observed in the table provided below:

Table 7. Results of Regression Analysis Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	,867	,159	
	VAIC	,038	,023	,307

a. Dependent Variable: Sscore

Source: Data processed (2024)

Based on the outcomes of the simple linear regression analysis presented above, the resulting linear regression equation model can be formulated as follows:

$$\hat{Y} = 0,867 + 0,038 X_1$$

This indicates that intellectual capital exerts a positive influence on financial distress within the Companies.

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4.1.2 Analysis of Correlation and Determination Coefficient

Table 8. Coefficient R

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,307 ^a	,094	,062	,8699671

Source: Data processed (2024)

Correlation (r) = 0.307 means that a very low correlation or relationship was found between intellectual capital and leverage to financial distress in the Company. The coefficient of determination = 0.094 which means that the high and low financial distress of 9.4% can be described by intellectual capital. However, the remaining 90.6% is described by other factors.

Table 9. Results of the t-test

Coefficients ^a					
Model		T	Sig.	Collinearity Statistics	
				Tolerance	VIF
1	(Constant)	5,438	,000		
	VAIC	1,704	,099	1,000	1,000

a. Dependent Variable: Sscore

Source: Data processed (2024)

The value of intellectual capital in the analysis is 1.704, while the critical value from the t-table with degrees of freedom $df = n - k - 1 = (30 - 1 - 1) = 28$ is 2.04841. Since the computed t-value (1.704) is less than the t-table value (2.04841) and the significance value (0.099) exceeds the conventional threshold of 0.05, the null hypothesis (H_0) cannot be rejected. This implies that intellectual capital has a positive but statistically insignificant effect on financial distress within the Companies. This finding is consistent with the research conducted by Nilasari and Primasari (2019), which similarly highlighted the limited impact of intellectual capital on financial distress.

4.2 Discussion

4.2.1 Intellectual Capital Factor

The average value of intellectual capital per year in the Companies has fluctuated and tends to decline. This is because the company has not been able to optimize the management of the 3 main components of intellectual capital, namely human capital, structural capital, and relational capital. The minimum value of the VAIC is -23.3577 times, which is found in PT Matahari Putra Prima Tbk in 2019. This indicates that the company's intellectual capital performance at PT Matahari Putra Prima Tbk in 2019 was -23.3577 times. The cause at PT Matahari Putra Prima Tbk is because the company has not been able to manage capital employed or relational capital properly. Capital employed includes harmonious relations that the company has through external parties such as suppliers, customers, the surrounding community and the government.

To increase intellectual capital, companies should collaborate more often through partners or other companies and also pay more attention to the community environment, such as carrying out social activities to create harmonious relationships between each other.

4.1.2 Financial Distress Factor

The average S-Score value at PT Duta Intidaya Tbk is 0.3714, which means the company is in a zone with potential financial distress. At PT Hero Supermarket Tbk, the average S-Score value is 0.2536, which means the company is also in a zone with potential financial distress. At PT Kokoh Inti Arebama Tbk, the average S-Score value is 0.9323, which means the company is in a safe zone. At PT Mitra Komunikasi Nusantara Tbk, the average S-Score value is 2.3466, which means the company is in a safe zone. At PT Matahari Putra Prima Tbk, the average S-Score value is 0.2501, which means the company is in a zone with potential financial distress. Furthermore, at PT Sona Topas Tourism Industry Tbk, the average S-

The overall average S-Score for all the companies in the sample is 0.8446. This

score indicates that, on average, the companies are at risk of experiencing bankruptcy or financial distress. The S-Score, a metric used to assess financial health, suggests that these companies may face significant challenges in maintaining financial stability and solvency. This average score reflects a potential vulnerability within the companies' financial positions, warranting closer scrutiny and potentially proactive measures to mitigate risks associated with financial distress.

The minimum value of the Springate Score is -0.8060 which is found in PT Sona Topas Tourism Industry Tbk in 2021. This means that the company in 2021 is in a zone that has the potential to go bankrupt or experience financial distress. The cause of this, in PT Sona Topas Tourism Industry Tbk in 2021, is because the company experienced a loss before tax so that the company could not pay off current debts. The loss before tax was due to a decrease in other income which caused profit before tax to be negative.

To minimize the risk of financial distress, companies should increase sales volume by utilizing digital marketing and providing discounts to attract new customers so that the profit balance increases and the company is able to pay off current debts.

4.1.3 Influence of Intellectual Capital on Financial Distress

Based on the results of the t-test analysis, the calculated t value for intellectual capital is 1.704, while the critical t-table value, with degrees of freedom (df) calculated as $n - k - 1 = (30 - 1 - 1) = 28$ is 2.04841. Since the calculated t value of 1.704 is less than the t-table value of 2.04841, and the significance value of 0.099 is greater than the alpha level of 0.05, the null hypothesis (H_0) cannot be rejected. Therefore, it is concluded that intellectual capital has a positive but statistically insignificant effect on financial distress within the Companies. This finding is consistent with the research conducted by Nilasari and Primasari (2019), which similarly found that the impact of intellectual capital on financial distress was

not significant.

5. CONCLUSION

- a. Intellectual Capital within the Companies has shown fluctuations and a general decline over time. This decline is attributed to the Companies' inability to effectively manage key components of intellectual capital, including human capital, structural capital, and relational capital. The lack of effective management in these areas has resulted in inconsistent performance and diminished overall value of intellectual capital.
- b. Financial distress within the Companies has exhibited fluctuations and a general decline. This trend is primarily due to a decrease in several critical financial indicators, including total assets, operating profit, profit before tax, and sales. The decline in these key metrics has contributed to the overall deterioration in the financial health of the Companies, leading to increased vulnerability to financial distress.
- c. The results of the simple linear regression analysis indicate that intellectual capital has a positive effect on financial distress in the Companies. This suggests that as the level of intellectual capital increases, there is a corresponding positive impact on the financial situation of the Companies. However, the magnitude and significance of this effect may vary, reflecting the complex relationship between intellectual capital and financial performance.
- d. The t-test results indicate that while intellectual capital has a positive effect on financial distress in the Companies, this effect is statistically insignificant. This means that although there is a positive relationship, it is not strong enough to be considered significant.

There are a number of recommendations related to the findings of this study, especially for the Retail Trading Sub-Sector Companies on the Indonesia Stock Exchange for 2018-2022, including:

1. To increase the value of intellectual

capital, companies should collaborate more often through partners or other companies and also pay more attention to the community environment such as carrying out social activities so that harmonious relationships can be established between each other.

2. To minimize the risk of financial distress, companies should increase sales volume by utilizing digital marketing and providing discounts to attract new customers so that the profit balance increases and the company is able to pay off current debts.
3. Due to the limited time of the study and there are still weaknesses from the author, this study has not been able to reveal all the measurements in this research variable, so researchers hope that in the future this research can be improved by adding measurements of variables that are not yet in this study.

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