The Effect of Intellectual Capital, Business Strategy, and Firm Performance on Bankruptcy Risk

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Abstract. The goal of this study is to examines the effect of intellectual capital, business strategy, firm performance on bankruptcy risk of listed firms in Indonesia Stock Exchange in year 2021-2022. The data comprises firms compossed from 2021 to 2022 for the non financial sector companies listed on the BEI. There are 280 companies and 480 data that fall into the criteria based on the purposive sampling method. Multiple Regression as data analysis techniques used SPSS software (version 21.0). Porter's strategies is used to measure business strategy in this reasearch. Independent variable be composed of intellectual capital, business strategy consisting of cost leadership, differentiation strategy, and ROA. Bankruptcy risk is dependent variable, and Size as control variable. The empirical results show intellectual capital (IC), strategy business (DS, CL), firm performance (ROA) and SIZE on bankruptcy risk shows that intellectual capital (IC) have no significant effect on bankruptcy risk (BR). Business strategy (BS) variable, namely in this case differentiation strategy (DS) have negative significant effect on bankruptcy risk (BR). Firm performance (ROA) variable have positif significant effect on bankruptcy risk (BR).

Keywords: Intellectual capital, business strategy, firm performance, size, bankruptcy risk.

1 Introduction

This Word document can be used as a template for papers to be published in EAI Core Proceedings. Follow the text for further instructions on text formating, tables, figures, citations and references. Many new companies are adding to competition in the industrial world in the current era of globalization. This competition requires companies to form or update their strategies so that they can meet company goals and survive the company. Companies need a strategic plan that congruence with the company's goals, vision and mission. Companies must adapt to the many new competitors in the industrial world and fluctuating economic conditions. According to the annual report of the Business Competition Supervisory Commission (KPPU), the business competition climate in Indonesia increase in 2021. This can be seen from compared to the previous year, Indonesia have business competition index was increased. Up from 4.65 to 4.81, the maximum value is 7. Companies operating in service sector, manufacturing and

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other sectors will compete to be the best and to survive. So companies will be encouraged to carry out many innovations or business strategies to avoid bankruptcy. Maintaining the continuity of a company in business activities is not an easy thing because every company is always faced with the risk of bankruptcy [1] Bankruptcy is one of the causes of companies in Indonesia experiencing delisting on the IDX. There are 14 companies potentially their shares delisted from the IDX in 2021, while in 2022 there are 11 issuers who are at risk of being delisted.

The firm's bankruptcy risk is a hot issue in literature, accounting, business, management, and has impact for decision-making stakeholders [2]. Risk that arises when a company is unable to fulfill its obligations so that to fulfill these obligations it requires action through legal channels to liquidate assets or reorganize its debts called Bankruptcy risk [3]. Impacts of bankruptcy to managements, society, creditors, shareholders, employees, and evaluation of company's bankruptcy risk. Thus, factor that influence the risk of bankruptcy is very important for shareholders and other business stakeholders.

One of the things or practices that cloud the assessment of bankruptcy risk is business strategy [4] To deal with uncertainty or strategic risks related firm work environment, business strategies are used. Implementation of this business strategy strengthens the identification of priorities that can influence current and future performance. So it make the company more profitable and can reduce bankruptcy risk happen upcoming [3]. Acording to [5], before investing is necessary predict, measure, reduce and evaluate bankruptcy risk a firm is something that attractive for investors. Capital providers who selectively choose a company that provides many benefits and is sustainable to improve value so that capital providers obtain the maximum results from company profits. Before investing investors are interested in predict, measure, reduce and evaluate bankruptcy risk of a company [5].

According [6], implementation of two company's general strategies, cost leadership strategy or differentiation strategy, or can also two strategies integrated to survive in a competitive and volatile business environment. Two ways to implement cost leadership are cost efficiency in the form of maximizing inputs to produce the desired output and asset savings in the form of maximizing the capacity of fixed assets owned to produce the desired output. For example, operational expense of Southwest Airline minimized with maintain employee retention at a rate of 92% and almost exclusively using Boeing 737–800. Differentiation is creating product uniqueness and unrivaled brand loyalty in an integrated and continuous manner [3].

To strengthen the company's innovation strategy and give the benefits of sustainable performance, usually through their employees, company investing in intellectual capital [7]. [8] show that recently the main economic resources are knowledge assets or intangible assets. intellectual capital is financial health critical factor, credit rating in the long run, increasing in financial performance. The company that have appropriate management in intellectual capital makes the company get increase market value reduce debt costs, and higher credit ratings.

Furthermore, maximizing the use of a company's intellectual capital support companies to make appropriate financial allocations regarding resources and investments of company to avoid the possibility a company going bankrupt, negative social impacts overall, ultimately reducing job losses. Thus, intellectual capital is used to predict bankruptcy makes the company capable allocate appropriate investments and financial resources [9]. Financial difficulties are a condition that often occurs in large companies in Indonesia. This financial difficulty is caused by the company not being able to manage its finances optimally [10]. This results in a maximum

share value that these companies cannot achieve. As a result, equity falls, even negative. In fact, equity is an important building block that companies need in times of financial distress.

Early handling of risks is very necessary. Therefore, apart from measuring the potential for bankruptcy, companies must know what factors can influence bankruptcy so that they can know the efforts that must be made to prevent potential bankruptcy. According to [11] the factors causing bankruptcy are divided into two factors, namely, external factors including economic conditions, politics, natural disasters and internal factors including firm performance, company policies and company culture. One way to detect potential company bankruptcy is by assessing company performance through profitability ratio analysis, one of which is return on assets (ROA) [11] Companies most often emphasize their ability to generate profits. If the company is able to use its resources well, then ROA will be high too. This means that the probability of corporate bankruptcy in the company ending is low. Companies that experience corporate bankruptcy are often caused by the company's inability to cover production costs. The ROA value also experiences a continuous decline. Previous research was conducted to determine the effect firm performance on bankruptcy risk results remain inconsistent. A company's ability to obtain profits is determined by a company's resilience to bankruptcy. This is in line with research from [12] showing that ability to obtain retained earnings will negatively influence bankruptcy. It can be concluded that it is getting bigger the cumulative profit company, the greater the company capital so the less likely it is to go bankrupt, it is more able to survive. Companies with good financial performance have a low risk of bankruptcy. While [13] show ROA is positively affect and significantly correlated to Altman Z. It shows that when the ROA increases, the Altman Z-score also increases bankruptcy risk. Firm performance (ROA) is positive and most significant to influence risk ROA representing the profits of the company. Thus, both values imply that an increase in profits (decrease in bankruptcy risk) will outcome into an increase in Altman Z.

So this research examines the effect intellectual capital, business strategies, firm performance on bankruptcy risk registered firms in Indonesia Stock Exchange in year 2021-2022. Business strategy (BS) consists of cost leadership strategy and differentiation strategy. To measure the intellectual capital using adjusted value-added intellectual coefficient. Ratio earnings before interest and tax on total assets is used for measure Firm performance. Altman Z score used to measured Bankruptcy risk. This study shows Intellectual Capital has no significant effects on bankruptcy risk. Business Strategy variable, consists of Differentiation Strategy have a significant negative effects on bankruptcy risk, Firm performance have positive significant effects on bankruptcy risk.

This research is the first in Indonesia analyze related the effects intellectual capital, business strategies, firm performance on bankruptcy risk in Indonesia. Moreover, on the Indonesia business landscape this research also offer contextually about intellectual capital, business strategy, firm performance, bankruptcy risk which in previous literature has never been done. This research adds important insight for stakeholders, both internal and external. Similarities in the field of study studied between researchers and previous researchers are this research analyzes the effects of intellectual capital, business strategy on bankruptcy risk following research [4]. This research contribute to development literature regarding business strategy in the Indonesian Stock Exchange. Concept development was carried out in this research about business strategy Porter typologies and contribute to adding to existing literature regarding performance of a firm and bankruptcy risk. Differs from the prior studies, that Miles and Snow business strategy typologies have effect on bankruptcy risk. Second, apart from analyzing

intellectual capital, business strategy influence on bankruptcy risk, this research also adds analysis regarding the influence of firm performance on bankruptcy risk.

Literature review

Regarding the definition of bankruptcy risk, there are two perspectives that can be said to dominate the discussion, namely event oriented and process oriented. event-oriented definition of bankruptcy risk, bankruptcy depend on the first time the event occurred because be regarded as a discrete event (time a firm filed for bankruptcy, not paying preferred stock dividend, overdraws bank account). Bankruptcy is a sequence of events starting from a cash flow decreased then get negative cash flow, decreasing in dividend payments which is then followed by a request for liquidation. Process-oriented definition viewing bankruptcy as risk from events series captures legal the spectrum ground bankruptcy filing and financial distress condition which lead towards bankruptcy filing or not. Based bankruptcy risk theory, definition of bankruptcy also identified reason occurs bankruptcy is caused by financial difficulties or distress [1]. Internal and external causes are two factors occur financial distress. Endogenous factor or Internal causes or applies to certain companies, reflect by through unprofitable projects, earnings management practices and poor management. Meanwhile systemically the external factor influence every companies like regulatory changes and market risks [5].

Intellectual capital has a significant role in health in the company's financial based extant literature. Ability to obtain equity and carry assets as well as intangible assets effectively and efficiently required to maintain long-term financial stability. Long-term value creation, financial stability, higher profitability, and the ability to repay debt on time occur due to the lower cost of debt, thereby reducing the risk of credit desired by investors or creditors [4]. Mostly investors or creditors invest the resources it has for company that have adequate intellectual capital because adequate intellectual capital are repay their debts and more capable to obtain future profits. Less likely to go bankrupt if companies have stability in long term financial because better company position will be create value [9].

[8] show that recently the main economic resource is knowledge assets or intangible assets, also as crucial factor in credit rating, financial health, in the long run increasing in financial performance. The company that have intellectual capital with appropriate asset management assist companies get increase market value reduce debt costs, and higher credit ratings. Furthermore, maximizing the use of a company's intellectual capital help allocate appropriate financial resources and investments company to reduce the possibility of a company going bankruptcy, ultimately reducing loss of a job and negative social impacts overall. Proper company's Intellectual capital manage and the use bankruptcy forecasting through intellectual capital help appropriately company allocate investments and financial resources so they drive social and economic growth based on the contemporary knowledges. Based on the explanation above, the first of hypothesis:

H1: Intellectual capital has negative effect towards bankruptcy risk.

According [6], implementation of two company’s general strategies, cost leadership strategy or differentiation strategy, or can also two strategies integrated to survive in a competitive and volatile business environment. Two ways to implement cost leadership are cost efficiency in the form of maximizing inputs to produce the desired output and asset savings in the form of maximizing the capacity of fixed assets owned to produce the desired output. This is obtained

by ways minimize the cost to obtain a given level of output and optimize fixed assets for use to obtain a given output level. Whereas differentiation refers to the development of unique products and channel distribution, customer loyalty to generate high profits. However these two strategies are implemented, they still have the aim of being superior to competitors, producing maximum profits or high levels of productivity. This will further ensure that the company maintains business continuity in environment full of competition and minimizes risk a company goes out of competition or business.

Financial difficulties can lead to company bankruptcy according to bankruptcy risk theory [5]. Financial difficulties occurs because two factors that cause internal causes and external causes [12]. Internal causes occur due to earnings management practices, poor company management, and unprofitable projects. While external factors are influenced by market risks and changed policies, specific to all companies [5]. [13] argued that companies must adopt appropriate strategic approaches and focus on increasing a goods and services competitive position in segment market and certain industries and if a company does not use the right business strategy, it can cause financial difficulties and even bankruptcy. Thus, the second hypothesis on this research:

H2: Business strategy has negative effect on bankruptcy risk.

According to [14] the factors causing bankruptcy are divided into two factors, namely, external factors including economic conditions, politics, natural disasters and internal factors including firm performance, company policies and company culture. Firm performance can be measured by ROA. ROA is obtained from the comparison of net profit with total assets. Net profit does not always provide profits for the company. The more profits earned, the more sales the company makes. These sales are usually financed by credit (loans). The more loans the company has to fulfill, the more total assets will be added to the financial statements (Balance Sheet). The finding this research be supported by the research of [15] that show ROA has significant positive influence on financial distress. A condition when a firm faces financial distress or conditions experienced by the company before bankruptcy occurred called financial distress. According to research by [16], the CAR and ROA ratios have a significant influence on the risk of bankruptcy. Meanwhile, according to Jan and [17], liquidity, leverage, profitability and solvency ratios have a significant influence on bankruptcy risk. So third hypothesis is:

H3: Firm performance has positive effect towards bankruptcy risk.

2. Method

To obtained data, this study from BEI that is non financial sector companies listed in Indonesia. To obtains the total sample of 280 companies and 480 data used the purposive sampling method. There are 833 firms listed in BEI in 2022, 131 financial sector and 222 outlier data. The set of data consist of 480 observed companies are obtained 2021 to 2022. To examine the effects of more than one independent variables on the dependent variables using multiple linear regression. The multiple regression analysis method was chosen because it was used to test the effect intellectual capital, business strategy on bankruptcy risk, also adds analysis regarding the effect firm performance on bankruptcy risk.

2.1 Variable measurement

This research test the effect of intellectual capital, business strategy, firm performances on bankruptcy risk. Bankruptcy risk is the dependent variable. Independent variables consists of intellectual capital (IC), business strategy (BS), firm performance(ROA). Firm size (SIZE) as variable control. According to [18] in [19] business strategy is a policy or stance taken by a company in response to a series of product and value mixes developed to outperform competitors and a competitive business environment. Business strategy (BS) consists cost leadership (CL), differentiation strategy (DS). [19] argue cost leadership (CL) is the ability to make a product or market more efficient than others competitor. Asset turnover of operation (ATO) used to measure the leadership costs. Based on [19] calculated by ATO, is ratio of operating sales on average operating asset. Definition of differentiation strategy (DS), company competence for create or obtain product quality with superior value and unique services and goods, excellent characteristics compared to competitors [19]. Differentiation strategy (DS) calculates by (Operating Income + R & D Expense) / Sales.

To measure intellectual capital (IC) according to [4]. Intangible asset, consisting of three components in the form structural capital, human capital, and relational or social which can potentially improve firms performance, creates value added to companies, reduces their risks, and improves their competitive power is definition of intellectual capital (Stahle et al., 2011). Value-added intellectual coefficient (AVAIC) used in measurements intellectual capital (IC). This measurement is the value added created or the components that form it consist of the sum of three results, namely HCE or human capital efficiency, CEE or value added capital employed, and SCE or structural capital efficiency [4].

The stages for calculating A-VAIC are as follows:

1: Calculating value added (VA):

VA = Net income + salary expense+ interest expense + tax expense+ depreciation and amortization expense + research and development expenses

2: Calculating the value of HCE, SCE and CEE :

HCE = Value added (VA) / HC, HC calculated by total salary expense.

SCE = Value added (VA) / SC, SC calculated by research and development expenses.

CEE = Value added (VA) / CE, CE calculated by the sum of total capital and total liabilities.

3: Calculating A-VAIC :

A-VAIC = HCE+SCE+CEE

Firm performance (ROA) measured by Return On Assets (ROA) which is ratio Earnings Before Interest and Tax (EBIT) divided with the Total Assets [13][4].

Altman Z-score is used as gauge of bankruptcy risk (BR). Developed in 1968 and over the past 20 years as an accurate measurement considered one or other to predicting the health of companies and for manufacturing firms used to measure the distance to default [4]. As multiple discriminant analysis, Altman Z-score merge the five ratios is profitability, leverage, liquidity, solvency, and activities [20]. Altman Z-score consists of three critical value interpretations [21]. Z is classified as bankruptcy area if the value less than or equal to 1.81, Z is classified as too healthy if the value is greater than or equal to 2.99, Z is classified as grey area and will experience the possibility of bankruptcy if the value is between 1.81 and 2.99. The greater Z score, the greater the financial strength of the company.

The following is the formula for calculating BR [4]:

Z = 1.2 X1+1.4 X2+3.3 X3+0.6 X4+0.999 X5 (1)

Where, X1 calculated by working capital divided by total assets, X2 calculated by retained earnings divided by total assets, X3 calculated by earnings before interest and taxes (EBIT) divided by total assets, X4 calculated by the market value of equity divided by total debt, X5 calculated by annual sales divided by total assets.

3. Results and Discussion

Need to be sure that the regression model used as the best model, it is necessary to test the classic assumptions, related to normality, multicollinearity, heteroscedasticity and autocorrelation. If the test of classic assumptions are not met it will cause bias in the research results. After fulfilling the classic assumption test, the next testing is carried out coefficient of determination, F test, and t test. Based on the table 1 and 3, the classical assumption test is met.

Table 1. Model summary

Model	R	R-Square	Adjusted R-Square	Standard Error of the Estimate	Durbin Watson (DW)
1	0.603[a]	0.364	0.357	0.52700	1.291

a. Predictors: (Constant), Size, CL, IC, DS, ROA
b. Dependent Variable: BR

Table 2. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.184	5	15.037	54.141	0.000[b]
	Residual	131.644	474	0.278		
	Total	206.828	479			

a. Dependent Variable: BR
b. Predictors: (Constant), Size, CL, IC, DS, ROA

The F test above show that the regression equation model used is a fit model so that it can be used to predict the risk of bankruptcy. The value of calculated F is 54.141 significant at 0.000, is smaller than 0.05.

Table 3. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF

(Constant)	7.367	0.764		9.647	0.000		
IC	0.004	0.004	0.035	0.934	0.351	0.935	1.069
DS	-1.086	0.188	-0.243	-5.786	0.000	0.763	1.310
CL	-.035	0.448	-0.006	-0.079	0.937	0.224	4.464
ROA	3.547	0.461	0.609	7.695	0.000	0.215	4.659
Size	-1.195	0.152	-0.295	-7.845	0.000	0.947	1.056

Table 3 show that no multicollinearity problem. Multicollinearity test, aim to observing is there a large correlation in the multiple linear regression model. Therefore, to find out in this test the VIF value is used. No multicollinearity problem if the value of VIF smaller than 10. Based multicollinearity test, value of VIF of each variables is smaller than 10, and the tolerance show that regression free from multicollinearity. Business strategy (BS) that consist of cost leadership (CL) variable is 4,464 and Differentiation Strategy (DS) variable is 1,310, the intellectual capital (IC) variable is 1,069, ROA variable is 4,659, and SIZE variable is 1,056. The tolerance value of cost leadership (CL) variable is 0,224 and Differentiation Strategy (DS) variable is 0,763, the intellectual capital (IC) variable is 0,935, ROA variable is 0,215, and SIZE variable is 0,947, greater than 0.1. The other classical assumption test is met.

Based on Table 1, Determination coefficient test it is a tool used in order to calculate the capability of the model that has been made when interpreting the dependent variable. It should be understood that the coefficient value consists of 0 to 1. The better the accuracy if the value of R2 ($0 \leq R2 \leq 1$) is getting bigger. Known R-square or coefficient determination is 0.364 or 36.4%. This shows that 36.4% of Bankruptcy Risk is be affected with independent variables (business strategy, intellectual capital, firm performance). For the rest 63.4% explained with another factors besides outside in this model study.

Table 1 show simultaneous regression test (F-test), to decide how much the independent variables affect together the dependent variables. The alpha value be used to the F test 5%. F value is 54,141 with a probability of 0.000, is less than 0.05. Can be conclude that model used is a fit model so it can be used to predict Bankruptcy Risk (BR). This means with 95% confidence level, intellectual capital, business strategy, firm performance simultaneously influence bankruptcy risk (BR). Based on Table 3, t test aims to assign how much influence does each independent variable have on the variable of dependent. Hypothesis testing criterias, if greater t count than t table or significant value is under 0.05 then reject H0 and accept Ha, it means independent variables have significant effect to the dependent variable.

3.1 The effect of intellectual capital on bankruptcy risk

Table 3 show that intellectual capital (IC) have a beta coefficient positive 0.004 and not significant at 0.351 because more than 0.05. This means that the Intellectual Capital (IC) variable is proven to have no significant effect on bankruptcy risk (BR), therefore hypothesis 2 is rejected. The test results show that the effect of intellectual capital positive but not significant on bankruptcy risk. These results reject the hypothesis stating intellectual capital has negative effect towards bankruptcy risk. This evidence contradict research [9] that show mostly investors or creditors invest the resources it has for company that have adequate intellectual capital because adequate intellectual capital are repay their debts and more capable to obtain future profits. Less likely to go bankrupt if companies have stability in long term financial because better company position will be create value. The firm will to create value be in a better position if have financial stability in long term they so they are less likely to go bankrupt. The research

results are supported by [4] show that intellectual capital (IC) components are the sum of HCE or human capital efficiency, CEE or value added capital employed, and SCE or structural capital efficiency regression results have no influence on bankruptcy risk (BR). Capital employed, structural capital, human capital as components of intellectual capital show that there is no significant influence on bankruptcy risk. This result is refute the previously established hypothesis which states. This could be because the characteristics of the research subjects in this study, mining and manufacturing companies, are different from most research subjects conducted by other researchers who use financial sector companies or only a few sectors.

The result of this research is in line with Resource Based Theory that argues that maintaining advantage of competitive refers to the certain key resources ownership and effectively optimize resources, namely resources that have characteristics such as barriers and value to duplication. The company will have good performance and excel in business competition by owning, controlling and utilizing important strategic assets in the form of tangible and intangible according to view resource based theory [4]. According to [2], there are two main things that organizations need to be able to compete. First, it has advantages in resources, both tangible and intangible assets. Second, the ability to manage resources so that they can be utilized effectively. The combination of assets and the ability to utilize them is claimed to create certain characteristics for the company's competence, so that it is superior to competitors. Ownership and utilization of intellectual capital will provide competencies to companies to excel in business competition. Apart from that, the absence of a significant effect for intellectual capital also indicates that the use of intangible assets in the sample companies in this study has not been maximized so it cannot provide more benefits to the company in this case to reduce bankruptcy risk. Positive coefficient intellectual capital results in this research on bankruptcy risk indicates that the use of intangible assets in the sample companies has not been utilized effectively and efficiently.

3.2 The effect of business strategy on bankruptcy risk

Table 3 represent the results regression of business strategy (DS, CL), intellectual capital (IC), firm performance (ROA) and SIZE on bankruptcy risk (BR). The business strategy (BS) variable, namely in this case differentiation strategy (DS) has a negative beta coefficient of -1.086 and significant value of 0.000, below 0.05. Can be concluded that the Business Strategy (BS) have negative effect significantly to bankruptcy risk (BR), therefore hypothesis 2 is accepted. Based on Porter's competitive strategy framework, implementation of two company's general strategies, cost leadership strategy or differentiation strategy, or can also two strategies integrated to survive in a competitive and volatile business environment. Two ways to implement cost leadership are cost efficiency in the form of maximizing inputs to produce the desired output and asset savings in the form of maximizing the capacity of fixed assets owned to produce the desired output. This is obtained by ways minimize the cost to obtain a given level of output and optimize fixed assets for use to obtain a given output level. Whereas differentiation refers to the development of unique products and channel distribution, customer loyalty to generate high profits. However these two strategies are implemented, they still have the aim of being superior to competitors, producing maximum profits or high levels of productivity. This will further ensure that the company maintains business continuity in environment competitive and minimizes risk a company loss of competition.

[4] shows that business strategy (BS) regression results have a negative influence on bankruptcy risk. Differentiation strategy aim to outperform competitors, ensure that company can minimize risks, and endure continuation business at rivalry environment. Management can use

differentiation demonstrate to investors than other companies the company superiorly because to actualize competitive advantage be required different approach [6]. In terms of differentiation, Competitive advantage is firm performance with generate sundry unique products to attract consumer attention in the hope of increasing sales and profits, thus providing a good signal for investors and users of financial reports to perform above average. [4] investigated effects of business strategy toward bankruptcy risk, results business strategy increase the financial performance so that later it can be reduced bankruptcy risk. Second, [22] and [5] inspect effects business strategy and bankruptcy risk results obtained negative and significant. The firm that have significantly greater financial performance thus lead to lower risk of bankruptcy if implementing one of two generic strategies. [4] found that a lower bankruptcy risk was caused by a higher business strategy index. This implementation make the company is in motion lead to a more financially sound analyzer and prospector type of strategy.

Based bankruptcy risk theory, financial difficulties can bring to bankruptcy of a company. Financial difficulties occurs because two factors that cause internal causes and external causes [12].Internal causes occur due to earnings management practices, poor company management, and unprofitable projects [5]. While external factors are influenced by market risks and changed policies, specific to all companies. [13] argued that companies must adopt appropriate strategic approaches and focus on increasing a goods and services competitive position in segment market and certain industries and if a company does not use the right business strategy, it can cause financial difficulties and even bankruptcy. Business strategy any inappropriate cause difficulties finance and bankruptcy. Studies by [4], [23]. [3] supports the research results as their study found that business strategy in terms differentiation strategy diminish bankruptcy risk. The company's success in implementing differentiation strategy will lead to obtain competitive advantage above their competitor so decrease their bankruptcys. The differentiation of strategies used makes the company try to share brand loyalty or innovations so that the implementation of whichever strategy is successful will make the company better in its performance although practice of the two strategies will be different.

3.3 The effect of firm performance on bankruptcy risk

The results base on Table 3, firm performance (ROA) have beta coefficient positive 3,547 and significant at 0.000 and is below 0.05. This means that firm performance (ROA) variable is proven to have positif significant effect on bankruptcy risk (BR), therefore hypothesis 3 is accepted. [15] shown that firm performance (ROA) is positively affect and significantly on bankruptcy risk (BR). It shows that when the ROA increases, the Altman Z-score also increases. Firm performance (ROA) representing the profits of the company. Thus, both values imply that an increase in profits (decrease in bankruptcy risk) will outcome into an increase in Altman Z. The ROA coefficient value is positive, which means that if ROA increases, bankruptcy risk will also increase. ROA is obtained from the comparison of net profit with total assets. Net profit does not always provide profits for the company. The more profits earned, the more sales the company makes. These sales are usually financed by credit (loans). The more loans the company has to fulfill, the more total assets will be added to the financial statements (Balance Sheet). So the results effect of ROA positively significant on bankruptcy risk (BR) can be accepted. [15] support this result that ROA have positive significant effect on bankruptcy risk. Support for research results is also obtained from research [24]. and Muhtar (2017) which has the results that the ROA ratio has a positive and significant effect on bankruptcy risk or financial distress. According to [5], based on bankruptcy risk theory, there are two factors that can cause financial difficulties, namely internal and external causes. Consistent with internal causes, or endogenous

factors, applicable to certain companies and reflected through unprofitable projects, practice of earnings management and poor management. It can be understood that net profit does not always provide profits for the company. Profit is not always in the form of cash sales but can be in the form of receivables for which cash was not obtained. The more profits earned, the more sales the company will generate. These sales are usually financed with credit (loans), therefore this will actually burden the company in terms of the interest costs that must be paid.

4. Conclusion

The study purpose examines the effect of intellectual capital, business strategy, and firm performance on bankruptcy risk of listed firms in Indonesia Stock Exchange in year 2021-2022. The examine show that there is no significant effect intellectual capital on bankruptcy risk, business strategy have a significant negative effect on bankruptcy risk, firm performance have positive significant effect on bankruptcy risk.

Several implications of the research findings for theory, management and investors. Based on theoretical perspective implies the type Porter's Differentiation Strategy capable to mitigation of bankruptcy risk. Identification of investors regarding differentiation, companies with a differentiation strategy type are able to maintain investment security better because the risk of bankruptcy is lower when compared to cost leadership. The practical implications for management stemming from the research outcomes are firms moving towards Differentiation Strategy are more financially healthy, so through differentiation strategy, management must be able to develop customer loyalty, product uniqueness and unique distribution channels with the goal to obtain high margins. Regardless however these two strategies are implemented, they still have the aim of being superior to competitors, producing maximum profits or high levels of productivity. This will further ensure that the company maintains business continuity in a competitive environment and minimizes the risk a company goes out of competition or business. A higher capital intellectual in non-financial firms demonstrates there is no influence on efforts to prevent the risk of bankruptcy. So, management must focus on lower leverage and efficient use of resources to improve financial health and increase investor confidence. High firm perfomance or net profit does not always provide profits for the company. The more profits earned, the more sales the company makes. These sales are usually financed by credit (loans). The more loans the company has to fulfill, the more total assets will be added to the financial statements (Balance Sheet).

The results of this study have several limitations. The first, this study uses data only from Indonesia Stock Exchange in year 2021-2022. Further research needs to be carried out in other countries to understand whether the results of this study can be generalized to other countries with similar regulations, culture and other emerging markets. Second, measuring business strategies uses past financial data and does not yet consider the company's current conditions or prospects, so to measure business strategy, further research can measure based on surveys. Coefficient of determinant model value is categorized as moderate. Therefore, future research can add other factors outside the variables in this research.

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