

INFLUENCE OF INTELLECTUAL CAPITAL, OWNERSHIP STRUCTURE, AND PROFIT VOLATILITY ON COMPETITIVE ADVANTAGE WITH VARIABLE INTERVENING RISK CULTURE CHAIN

ADELINA SURYATI¹ and ETTY MURWANINGSARI^{2*}

¹Faculty of Economics and Business, Universitas Panca sakti, Indonesia.

²Faculty of Economics and Business, Universitas Trisakti, Indonesia.

*Corresponding author's Email: etty.murwaningsari@trisakti.ac.id

Abstract

This research aims to analyze the influence of intellectual capital, ownership structure, and profitvolatility on competitive advantage with intervening risk culture chain variables and competitive advantage with intervening risk culture chain variables. The methods used in research use quantitative concepts. Quantitative research is based on an assumption that a symptom has a causal relationship. The population used in this study is a banking company that is listed on the Indonesia Stock Exchange or that is not listed on the Indonesia Stock Exchange. The period of annual financial statements used in this study from 2014 to 2019 Accumulated there are 85 banking companies that sampled this study because it has complete data. The results of this studyconcluded that there is a positive and significant influence of intellectual capital on the risk culturechain, ownership structure to competitive advantage, and profit volatility on competitive advantage. the negative and significant ownership structure of risk culture chain, volatility of profit to risk culture chain, and intellectual capital to competitive advantage and Risk culture chain have a significant positive effect on competitive advantage and risk culture chain it has a significant influence in mediating intellectual capital relations with competitive advantages.

Keywords: Intellectual Capital, Ownership Structure, Risk Culture Chain.

INTRODUCTION

The factors that exist in a competitive business environment today are much more complex and different from the business environment in the past. The advancement of information technology (IT), production methods, evolving technology, and customer satisfaction are environmental conditions that are interrelated dynamically and complexly sothat environmental character is formed in business (Hakkak, 2015). This causes the companyto have a special advantage to succeed, survive, and sustainability in this highly competitive market.

Competitive advantage is a higher level of attractiveness than what the company offers compared to its competitors in the customer's view (Hakkak, 2015). Porter (1980) stated that the competitive advantage in the form of superior products with lower production costs resulted from competitive strategies. In resource-based theory (RBT) competitive advantage is the creation of abnormal profits or above-average returns by utilizing special features owned by the company (Lin and Hunag, 2011).

Companies that have a competitive advantage must improve the key aspects that contribute to the success of activities (Hakkak, 2015). Key aspects that affect a company's competitive

advantage include environmental practices (ENVPR), social practices (SOCPR), upper and medium management support (TMMS), strategic purchasing (SP), (Vargas, Mantilla, & Jabbour, 2018), information technology (Mc Gaughey et al., 1994), production behavior, production culture models, government regulations, corporate social responsibility, quality assurance (Ding et al., 2019), and intellectual capital (Arabiyat et al., 2018), leadership structure (Azzahra, 2018). There is one other key aspect that also affects competitive advantage that has not been much researched, namely profit volatility (profit fluctuations). Furthermore, the focus of this research will analyze 3 key aspects that affect competitive advantage, namely intellectual capital, ownership structure, and profit volatility.

Throughout the first semester of 2018, state-owned banks managed to record greater profits than private banks. Citing data from the Financial Services Authority (OJK), until June 2018, the net profit of state-owned banks was IDR 86.6 trillion. This figure increased by 17.26% year on year compared to the 2017 period of Rp 73.9 trillion. While the net profit of private banks was Rp 62.7 trillion or up only 1% from the same period in 2017 Rp 62.1 trillion. The market share of state-owned banks' profits compared to total banking until June 2018 is also higher at 50% compared to private banks at 36%. Until June 2018, state-owned banks recorded an average total asset of Rp 2,945 trillion or an increase of 10.8% compared to the same year period of 2017 of Rp 2,658 trillion. Meanwhile, the total assets of private banks amounted to Rp 3,182 trillion or an increase of 9.09% from the same period in 2017 of 2,917 trillion. Then, if you look at the profitability ratio or ROA, state-owned banks are also superior to 2.94% or up 16 basis points (bps) from the same period in 2017 of 2.78%. While the profitability ratio of private banks 1.97% or down 15.6 bps.

Then based on data from the Banking Industry Profile Report, Indonesia's banking condition at the end of 2019 was well marked by the growth of bank capital (CAR) by 23.31% from the previous year of 22.97% or an increase of 43 basis points. Along with the increase in the amount of capital (CAR), banks are expected to be able to increase the amount of profit or profit (ROA) generated, (Margaretha, 2017). But at the end of 2019, government banks even experienced a decline in profit-making (ROA) from 3.08% to 2.81%. Unlike the national private bank which increased from 2.20% to 2.27%.

The term intellectual capital was first coined by economist John Kenneth Galbraith who wrote a letter addressed to his colleague Michal Kalecki in 1969. The role of intellectual capital to competitive advantage, among others, in 4,254 companies went public on the Taiwan Stock Exchange in 2002 where financial performance and firm value were positively influenced by intellectual capital (Chen et al., 2005), in 150 companies listed on the Singapore Stock Exchange showed that the company's performance was positively related to intellectual capital (Tan et al., 2007) and banks in Portugal and Spain have revealed the average value of information about intellectual capital i.e. structural capital and human capital is 45% (Silva et al., 2018). This shows that intellectual capital has a positive influence on the competitive advantage of a company. The characteristics of ownership structure in Indonesia are different from those of companies in other countries. In Indonesia, company owners have a tendency to sit on the board of directors or commissioners. Another thing, often encountered conflicts between managers

and owners, between majority and minority shareholders (Wiranata, 2013). Jensen & Meckling (1976) stated that there is a separation between ownership and control of the company then the agency conflict arises. This is because the parties involved in the company have different interests (Azwari, 2016).

Profit volatility occurs due to information from management about the ups and downs of the company's earnings report (Moyer et al., 2000). This can lower the level of trust of shareholders due to conflicts of interest between shareholders and managers that cause distrust of customers and consider the company does not have a competitive advantage (Hakkak, 2015; Sigalas & Pekka, 2013). In measuring the stability of profits obtained by the company every year, Khurniaji (2013) stated that it can be measured using profit volatility or earning volatility. Companies that have a high risk of investing are companies that have unstable income levels. This results in stock price volatility so that the stock is not attractive to buy and very risky, (Zahro, 2014). Company risk occurs due to deviations from earnings either less or more than planned earnings. This happens because of uncertain conditions in the future. According to Budiman and Setiyono (2012) stated that the greater deviation of the company's earnings indicates the company's greater risk as well, (Damayanti & Susanto, 2016). Paligrova (2010) states that the company's risk is measured by the standard deviation of EBITDA (Earnings Before Income Tax, Depreciation, Amortization) against the company's total assets, (Damayanti & Susanto, 2016). Coles et al. (2004) states that the small risk of the company reflects the category of risk of company executives where the greater the risk of the company then the risk category of the company's executives is called risk taking and if otherwise the risk category of the company's executives is called risk averse, (Damayanti & Susanto, 2016). Therefore, profit volatility is one of the key aspects that need to be researched because it will cause risks to the company that cause distrust in the company because the company does not have a reliable competitive advantage. Several studies have been conducted to analyze competing methods or strategies that can optimize and find out the relationship between the key aspects of business success and the Competitive advantage of a company. Cao et al (2019) research using method or research techniques conducted include the decision-making effectiveness (DME) method to analyze resource-based view (RBV) whose ability is supported by IT positively related to competitive advantages. Differing based on Ding et al (2019) research by using structural equation models to analyze interactive relationships between determining factors, and provide insight into the impact of factors determining competitive advantage of a business, while based on Hakkak research (2015) analyzed employee performance in companies and competitive advantages using balanced scorecards, double-level codification. Which combines tradition and innovation for competitive advantage, (Stupino et al., 2019), and risk management capabilities and risk culture to competitive advantage, (Althonayan et al., 2012; Bozaykut, 2017; Damayanti & Susanto, 2016; Elahi, 2013; Jaffer, 2010). An important foundation on which successful corporate risk management is a risk culture (Wing et al., 2017). Risk culture can be said to be a major contributor to the risk outcome of an enterprise (Agarwal et al., 2019; Bui et al., 2018). According to the Institute of International Finance (IIF) (2009), risk culture is the norm and tradition of individual and group behavior within an organization that determines how they identify, understand, discuss, and

follow up on risks from the organization, and the risks required (Agarwal et al., 2019). In banking companies, risk culture is about taking valuable risks that financial institutions can bear to assess and as a result banks can manage these risks in an appropriate manner (Fritz-Morgenthal et al., 2016). The decisions taken and how to do the work are reflected in the risk culture. The more tangible the importance of risk culture because it is implemented in daily tasks and operational activities. In its implementation activities, risky work culture factors will be more prominent in determining the success of an activity (Bui et al., 2018).

John Dawson (2013) stated that the risk culture chain is applied based on 2 (two) cultural factors, namely risk management strategy and organisational culture drives. These two things are interrelated and form an unbroken chain. The risk culture system used is a risk culture chain (John et al., 2013), describing the risk culture chain as a whole entity that cannot be separated from each other to achieve the company's performance goals. Images related to the risk culture chain can be seen in figure 1.

Figure 1: Risk Culture Chain



In this era of globalization IT is the most important component in a company. IT risk (IT Risk) is a component of the overall risk of the business world including strategic, environmental, market, operational, credit, and compliance risks in a company. In many companies, IT-related risks are considered to be components of operational risk, for example in the financial industry, (Planas et al., 2004), and the German-based chemical company ALTA, (Jahner & Kremer, 2005). Therefore, IT risk is very necessary to maintain the competitive advantage of a company in this era of globalization. Based on Kompas.com October 17, 2019, the latest facts about the breach of customer funds from Bank BNI 46 amounted to Rp. 124 billion in October 2019. In the case of BNI 46, the breach of funds occurred was the unauthorized deposit of savings from customers. As well as the incident of the BRI bank case, the issue reported about skimming, based on the results of the investigation that the incident was not a skimming incident, but a cash breach of Bank BRI Tambun Bekasi Branch worth Rp. 13.8 billion, misappropriated bank BRI's parent cash amounting to Rp. 1.4 billion and broke into deposit accounts of a number of customers amounting to Rp. 1.4 billion and also broke into forex asset accounts amounting to Rp. 8.8 billion. Examples of the case of the break-in of Bank BNI 46 and Bank BRI occurred

due to the lack of risk governance in the bank, especially at the branch level. The management internally commits management fraud. Supposedly, management acts as a supervisor, not a supervised one so it needs to be suppressed by the tiered supervision system in the internal bank. So that the risks associated with business operations or better known as operational risk (operational risk) is the break-in of the bank by bank officials. This is a risk of operational failure risk caused by human resource factors. In response to operational risk (risk response), one of the steps taken is to build sensitivity or concern for human resources (HR) to the risk culture (risk culture). To make the relationship between variables that are not affected by outside factors that are not included in the study of use control variables such as, capital adequacy ratio (CAR), loan to deposit (LDR), company size (firm size), net profit margin (NPM), and operating expenses to operating income (BOPO).

The difference between this study and previous studies is twofold. First, placing the risk culture chain as a mediation/intervening variable, while in the previous study Dawson (2013) there was no mediation/intervening variable and the risk culture chain variable was separate, namely culture and risk. The risk culture chain in this study uses corporate theory. While previous research only linked culture theory and risk theory separately. The second difference is the measurement of risk culture chain, previous research to measure risk culture using questionnaires, this study measures the risk culture chain using content analysis, namely indicators using indices. This research will use data from banking companies in Indonesia using books 2 to book 4. The banking sector was chosen as the object of research because (a). This is an "intellectually intensive" business sector (Arifin, 2016) (b). Including the service sector, where customer service relies heavily on intellect / resource / human capital intelligence, (c). Is an institution known as risk taking entities (d). More related to risks in carrying out its operational activities and (e). Has a high level of regulation regulated by Bank Indonesia Regulations. Banks that apply a culture of risk and have a greater competitive advantage value. As well as the banking sector according to the Global Industry Classification Standard (GICS) classifies banking as one of the industries that have a high intellectual capital intensity (Woodcock, 2009). From the above description, the study of intellectual capital against competitive advantage, ownership structure to competitive advantage, profit volatility against competitive advantage. So it is important that this study examines the influence of intellectual capital, Ownership structure, and profit volatility on competitive advantage and risk culture chain as intervening variables.

METHOD

The methods used in research use quantitative concepts. Quantitative research is based on an assumption that a symptom has a causal relationship. Activities in data analysis consist of: (1) grouping data based on variables and data types, (2) tabulating based on their respective variables, (3) presenting data on each variable carefully, (4) performing calculations to test hypotheses that have been proposed previously (Sugiyono, 2016).

HYPOTHESIS

The hypotheses proposed are as follows:

1. Intellectual capital in this research is a concept based on resource based theory, this theory reviews how companies are able to utilize and manage existing resources. Wherein the form of tangible assets and intangible assets. One of the intangible assets is intellectual capital. Based on the description above, the author makes the following hypothesis:

H1: Intellectual Capital positively affects The Risk Culture Chain

2. Ownership structure as an instrument or tool to reduce conflicts of interest, imbalance of information through disclosure of information in the capital market and reduce agency costs sourced from agency problems. Therefore the ownership structure will align the interests of management and shareholders. Based on the description above, the hypothesis proposed by the author is as follows:

H2: Ownership Structure has a positive effect on risk culture chain

3. The third hypothesis in this study is supported by agency theory. In the concept of agency theory there is a separation of functions between the principal (owner of the company) and the agent, so the agreement is expected to maximize the utility of profit volatility influence. Based on the above description, the hypothesis proposed as follows:

H3: Profit volatility negatively affects Risk Culture Chain

4. The fourth hypothesis in this study is supported by resource based theory (RBT) or better known as resource-based theory that uses an approach in the analysis of competitive advantages. Based on the previous research above and the theory that supports the research hypothesis, the hypothesis in this study can be put forward as follows:

H4: Intellectual capital has a positive effect on competitive advantage.

5. The ownership structure largely determines the policies that occur in an organization. This policy will determine the vision, mission, goals and achievement strategies of an organization that are also related to the competitive advantage of a company. According to Berle and Means, the ownership structure can be seen from 2 (two) points of view, namely the agency approach and the asymmetric information approach. Based on the above description, the hypothesis proposed as follows:

H5: Ownership structure has a positive effect on competitive advantage.

6. The sixth hypothesis is supported by the company theory / theory of the firm, because The Company Theory recognizes profit maximization as the company's main target. First maximize short-term profit. In the long run, maximize the expected value (expected value). The main goal of a company according to the theory of the firm is to increase the value of the company (value of the firm) (Salvatore, 2005). Based on the above description, the author makes the following hypothesis:

H6: Profit Volatility negatively affects Competitive Advantage

7. The seventh hypothesis in this study is supported by the theory of the firm or the theory of the company. Corporate theory is an organization that combines and organizes resources with the

aim of producing goods and services for sale. Jensen and Meckling (1976) helped explain ten things in corporate theory. Based on the results of research Zhi Cao et al (2015), showed that the results of contiguence showed that both development and cultural groups have a positive relationship with all three dimensions of supply chain integration (SCI), but hierarchical culture has a negative relationship with internal integrase and customers. Based on the results of the above description, the hypothesis proposed as follows:

H7: Risk Culture Chain has a positive effect on Competitive Advantage

RESULTS AND DISCUSSIONS

The population used in this study is a banking company that is listed on the Indonesia Stock Exchange or that is not listed on the Indonesia Stock Exchange. The period of annual financial statements used in this study in 2014 to 2019 was as many as 92 banking companies.

Table 1: Sample Selection Results

No.	Banking	Population
1	Number of Banking Companies book 2, 3, and 4	92
2	Number of Companies whose reports do not consistently publish annual reports	1
3	Negative Reports	36
4	Number of companies in sample	85
5	Amount of observation data 85 x 6 years	510

Data sources are processed from www.idx.co.id

Accumulated there are 85 banking companies that sampled this study, because it has complete data. With a 6-year observation year from 2014-2019.

Descriptive Statistical Analysis of Variables – Dependent, Independent, Intervening and Control Variables

Descriptive statistics are done to describe from the data in this study so that it can provide a clear picture. Descriptive analysis is used to see how the picture of each research variable consists of the average, minimum, maximum and standard deviation values. The variables in this study are intellectual capital, ownership structure and profit volatility which are independent variables, then competitive advantages which are dependent variables, risk cultur chain intervening variables and Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Firm Size, Net Profit Margin (NPM), and Operating Expenses-Operating Income (BOPO) which are control variables. The results of descriptive statistical analysis on the variables studied are as follows:

Table 2: Descriptive Statistics – Research Variables

	N	Minimum	Maximum	Mean	Std. Deviation
Modal Intelektual					
HR	510	48,485	66,667	58,835	4,994
RS	510	52,381	68,254	57,918	4,400
SC	510	64,815	74,074	69,528	3,339
VL	510	0,004	0,087	0,016	0,009
Struktur Kepemilikan					
SK_Pemerintah	510	0,000	1,00	0,437	0,437
SK_Asing	510	0,000	0,99	0,409	0,417
SK_Institusional	510	0,000	1,00	0,365	0,361
SK_Managerial	510	0,000	1,00	0,162	0,158
Keunggulan Kompetitif					
Sales Growth	510	-0,872	2,579	0,127	0,280
Produktivitas	510	0,028	10317,498	244,401	1062,11
Profit	510	0,014	9,099	1,432	1,056
Market	510	0,002	0,197	0,012	0,030
Kualitas Aset	510	0,000	6,370	1,381	1,170
Inovasi	510	0,001	0,364	0,034	0,037
Risk Culture Chain					
RMS	510	44,444	88,889	66,144	9,501
OC	510	33,333	100,00	66,650	9,839
ITRM	510	40,000	100,00	70,588	13,864
CAR	510	0,102	0,836	0,235	0,097
LDR	510	0,230	4,820	0,960	0,370
SIZE	510	12,098	15,151	13,414	0,586
NPM	510	0,132	71,339	15,245	10,597
BOPO	510	37,330	119,430	81,991	12,183
Valid N (list wise)	510				

Source: Data processed

Table 2 above is the result of descriptive statistical testing for each research variable. For intellectual capital variables consisting of human capital indicators, relation capital, and structural capital. Judging from the average gain for human capital 58,719, relation capital 58,091, and structural capital 69,407 higher than the standard deviation value of human capital 5,038, relation capital 4,504 and structural capital 3,351. This means that the data used is good, there is no very high deviation data. The maximum value of human capital is 66,667 and the lowest value is 48,485. The highest value of relation capital is 68,250 and the lowest value is 52,380. The highest value of structural capital of 74,074 and the lowest value of 59,259 which shows that in the annual report of intellectual capital disclosure the highest during the research period from 2014 to 2019 is structural capital, so the banking company is good enough to disclose the ability of the organization or banking company in fulfilling the routine processes of the company and the structure that supports the business. Employees to produce optimal intellectual performance as well as overall performance. Disclosure of intellectual capital can also createtrust with employees and other stakeholders.

For variable volatility, the highest value profit of 0.087 shows that in one of the banking companies in this study has a high level of profit fluctuations obtained by banks from their operational activities during the period 2014 to 2019 amounting to 8.7% of its total assets in banking companies Bank Mandiri Syariah research year 2018 (book 3). While the lowest value of 0.004 shows that one of the banking companies in this study experienced a 4% profit fluctuation rate contained in Bank Mega Syariah in 2014 (book 2).

The dependent variables in this study are competitive advantage and have six indicators, namely sales growth, productivity, profitability, market share, asset quality and innovation. Based on the table above, it can be known that the average sales growth value of 0.116 is lower than the value of STD. deviation of 0.295 with a high value of 2.58 which shows that there is one banking company that has increased sales by 258%. A 258% increase in sales was found at banking company Bank Woori Saudara Indonesia 1906 in the 2015 research year (book2), and the lowest value of -0.923 which shows that there is one banking company that experienced a decrease in sales of 92.3%. The decrease in sales of 92.3% was found in the banking company Artha Graha Internasional Tbk (book 2) for the 2019 research year. The decline in sales by 92.3% was due to an increase in non-performing loans. Then the average productivity value of 231,485 is lower than the std. deviation value of 1027.78. The highest value of 10,317.49 or 10,317% indicates that there is one banking company that has very high productivity, namely The Bangkok Bank Comp. Ltd research year 2017 (book 3) and the lowest value of 0.001 which indicates that there is one banking company that has low productivity.

The average profitability value of 1,156 is lower than the value of the STD. The deviation is 1,642 with a high value of 9,099 which shows that there is one banking company that has a profit of 9.09% namely banking company Bank BTPN Syariah in the 2019 research year (book 3) and Bank of India Indonesia in the 2019 research year (book 3) has the lowest value of -11,728 which shows that the ability to make a profit of minus 11.7% or suffer a loss of minus 11.7%. The average market share value of 0.011 is lower than the value of STD. deviation of 0.053 with a high of 0.550 which shows that there is one banking company that has a market share of 55% and a low value of 0.001 which shows that there is one banking company that has a very low market share. Asset quality is measured by Non-Performing Loan/NPL. Based on the test results table, the average asset quality value was 1,485 higher than the std value. The deviation is 1.284. The highest value of 8,730 shows that there is one banking company that has a high level of bad loans so that the credit risk borne by the bank is greater. The highest NPL value in this study was in Rabo Bank in 2019 (Book 3) at 8.7%. According to Bank Indonesia, the ideal NPL ratio for the banking sector is 5%, where a ratio that is getting higher than 5% indicates high bad loans in a bank. The high value of NPL at Rabo Bank, because Rabo bank suffered a very large loss in 2019. The lowest value of 0,000 or 0% indicates that there are several banking companies that do not have bad loans, namely Bank JP Morgan Chase, NA in 2014 to 2019 (book 3), Bank SBI Indonesia in 2017 and 2018 (Book 3), Bank BNP Paribas in 2014 to 2019 (book 3), Deutsche Bank in 2018 and 2019 (book 3), Bank of America from 2014 to 2019 (book 2), Bank National Nobu from 2014 to 2016 (book 2), and Bank Jasa Jakarta in 2016 and 2017 (book 2).

In this study there are five control variables, namely Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Firm Size, Net Profit Margin (NPM), and Operating Expenses-Operating Income (BOPO). Based on the table above, it can be seen that the average CAR value or capital adequacy ratio of 0.239 is greater than the STD. the deviation is 0.126 which indicates that the data used is good. The highest CAR value of 0.836 indicates the ability of banking companies in providing funds to overcome possible risks in the form of capital adequacy of 83.6%, namely Bank of America in 2019. The lowest value of 0.102 or 10.2% indicates the bank's ability to overcome the possible risk of loss of 10.2%, namely at Bank Mayapada International in 2014 (book 3). If we look at Bank Indonesia Regulation No.15/12/PBI/2013 concerning Minimum Capital Provision Obligations of Commercial Banks of 8%, this regulation took effect on January 1, 2014.

The average loan to deposit ratio (LDR) of 0.995 is greater than that of the STD deviation of 0.851 indicating that the data used is good enough. The highest value of LDR is found in Rabo Bank Indonesia at 1,873%, indicating that Rabo Bank banking in this research sample is not able to meet its short-term obligations or very high bank liquidity and high bad loans in the bank, the ideal ratio of NPL 5%, The lowest value of LDR on JP Bank. Morgan Chase, NA of 0.230 indicates that Jp Morgan Chase Bank, NA is able to meet short-term obligations or liquidity levels of JP Morgan Chase bank, NA is very low 23%, so it is said that JP Morgan Bank is very healthy because it does not have bad loans. Bank liquidity or LDR in this study is considered healthy because the LDR ratio is below 110%.

The firm size control variable in the study was measured by total asset assets showing an average firm size value of 13,391 higher compared to std. deviation of 0.587. This state of affairs indicates that the size of the sample company in this study is homogeneous and the data used is already quite good. The highest value of 15,151 shows that there is one banking company that has a large total asset size compared to other banks, namely Bank BRI at 15.15% in 2019, while the lowest value of 12,005 shows that the smallest company size is 12% of this research sample, namely Bank Oke Indonesia in 2014 (books 2). The average net profit margin (NPM) of 12,132 is smaller than the standard deviation of 17,543. While the highest npm value of 71,339 shows that there is one company, namely ANZ bank in the 2018 research year (book 3) has the company's ability to generate a net profit after tax of 71.33%. The lowest value of -120.79 means that there is one banking company in this study sample showing a loss of 120.78%, which is in Bank India Indonesia in 2016 (book 2). The loss was due to the bank's net interest income falling by 23.08% and operating expenses jumped 412.8% (Kontan.co.id, November 16, 2016). The average BOPO value of 84,459 is greater than that of std. deviation of 18,462, meaning that the data used is quite good. The highest value of 235.20 indicates that there is one banking company that has a level of efficiency and the ability of the bank in carrying out its operations of 235.2%, while the lowest value of 16,280 means that the more efficiency of banking in its operations, because the smaller the value of BOPO the more efficient banking in its operations. This condition illustrates that in this research sample the bank can make efficiency of its banking operations is Bank Rabo Bank in 2019 (book 2), while the bank that cannot make efficiency in its banking operations is Bank of India Indonesia in 2016, so that the bank suffered a large loss on net profit margin reaching 120.79%.

PLS-SEM Analysis

The PLS-SEM analysis in this study is used to answer the formulation of problems and hypotheses that have been proposed regarding the influence of intellectual capital, ownership structure, and profit volatility on competitive advantage with intervening risk culture chain variables. In this study, the control variables used were CAR, LDR, SIZE, NPN, and BOPO. The author will conduct a series of quantitative analyses relevant to the purpose of research processed using structural equation modeling with alternative methods partial least square.

In structural equation modeling there are two types of models formed, namely the measurement model (outer model) and the structural model (inner model). The measurement model describes the proportion of variance of each manifest variable (indicator) that can be described within the latent variable. Through the measurement model, it will be known which indicators are more dominant in forming latent variables. After the measurement model of each latent variable is outlined, a structural model will be outlined that will examine the influence of each independent latent variable (exogenous latent variable) on the dependent latent variable (endogenous latent variable).

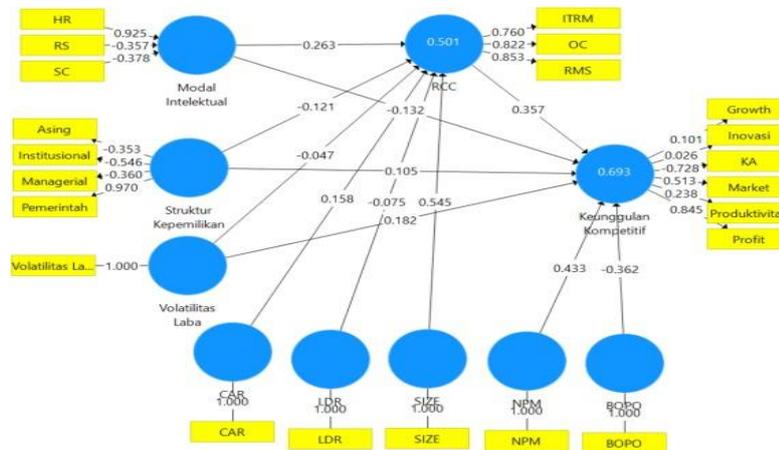
a) Measurement Model Testing (Outer Model)

Evaluation of measurement models (outer models) includes checking individual convergent validity (judging from the value of outer loadings), average variance extracted (AVE), discriminant validity and composite reliability.

1) Convergent Validity Test

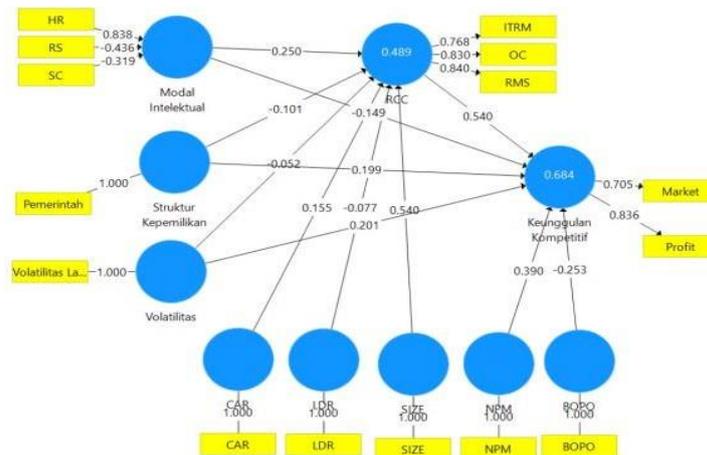
Convergent Validity of measurement models with reflective indicators is assessed based on the correlation between the score item and the construct score. If the loading factor has qualified convergent validity by having a value of more than 0.5 then it means that all indicators are valid as a measuring instrument for their respective variables. In addition to being seen from the loading factor value, convergent validity can also be seen from the Average Variance Extracted (AVE) value. AVE is said to be valid if it has a value greater than 0.5. Here are the results of the full structural model test based on the results of the PLS Algorithm.

Figure 2: Full Structural Model (PLS Algorithm)



Based on the figure above, it can be known that there are several reflexive indicators that have a loading factor value below 0.5 then it is not valid. Among them are indicators of foreign, institutional, managerial ownership structures that are reflective of the variable ownership structures. Then the indicators of Growth, Innovation, Market share and productivity are reflective of the variables of competitive advantage. So that these indicators must be gradually reduced from the structural model. Here are the results of the full retesting of the structural model after invalid indicators are reduced.

Figure 3 Full Model of Structural Reduction (PLS Algorithm)



Based on the figure above, it can be known that all reflective indicators have a loading factor above 0.5, so it is valid as a measuring instrument for each construct. For more details can be seen in the following recapitulation table:

Table 3: Convergent Validity Testing

Variable	Indicators	Loading factor	T Statistics	AVE	Conclusion
Formative					
Intellectual Capital	HR	0,838	7,482	-	Significant
	RS	-0,436	6,483	-	Significant
	SC	-0,460	2,750	-	Significant
Reflective					
Ownership Structure	Government	1,000	3,470	1,000	Valid
Profit Volatility	Profit Volatility	1,000	2.126	1,000	Valid
BOPO	BOPO	1,000	5.055	1,000	Valid
CAR	CAR	1,000	6,194	1,000	Valid
LDR	LDR	1,000	2,446	1,000	Valid
NPM	NPM	1,000	7,372	1,000	Valid
SIZE	SIZE	1,000	9,850	1,000	Valid
Risk Culture Chain	ITRM	0,768	29,097	0,662	Valid
	OC	0,830	38,433		Valid
	RMS	0,840	65,774		Valid
Competitive Advantage	KA	0,705	11,937	0,747	Valid
	Profit	0,836	26,175		Valid

Table 3 above is a recapitulation of the results of the measurement model test. Based on the table above, it can be known that intellectual capital variables are measured by formative indicators, each indicator has a t-statistical value greater than 1.96. This shows that each indicator has been significant in forming intellectual capital variables.

2) Discriminant Validity Test

Discriminant validity testing can be seen from the cross loading value, where each indicator that measures the construct must be higher correlated compared to other constructs. Thus the cross loading value can be declared valid if the indicator has a dominant effect on the measured latent variable. In addition to Cross Loading testing, discriminant validity testing can also be seen using the Fornell-Larcker criterion, which states that if the value of \sqrt{AVE} is higher than the correlation between other constructs then it can be concluded that the construct has a good degree of discriminant validity. Here are the results of the discriminant validity test with the Cross Loading test.

Table 4: Cross Loading Testing

	BOPO	Car	LDR	NPM	Ownership Structure	Size	Profit Volatility	Risk Culture Chain	Competitive Advantage
BOPO	1,000	-0,092	-0,247	-0,692	-0,073	-0,159	0,336	-0,102	-0,709
CAR	-0,092	1,000	0,185	0,106	0,072	-0,263	-0,126	-0,029	0,144
LDR	-0,247	0,185	1,000	-0,212	0,010	-0,010	-0,041	0,006	-0,124
NPM	-0,692	0,106	-0,212	1,000	0,040	0,184	-0,418	0,142	0,844
Government	-0,073	0,072	0,010	0,040	1,000	-0,431	-0,052	-0,391	0,113
SIZE	-0,159	-0,263	-0,010	0,184	-0,431	1,000	-0,171	0,639	0,106
Profit Volatility	0,336	-0,126	-0,041	-0,418	-0,052	-0,171	1,000	-0,131	-0,245
ITRM	0,009	-0,106	0,023	-0,019	-0,326	0,467	-0,109	0,764	-0,035
OC	-0,089	0,012	0,009	0,087	-0,470	0,496	-0,089	0,808	0,080
RMS	-0,140	0,005	-0,011	0,230	-0,189	0,576	-0,120	0,852	0,222
KA	-0,404	0,203	-0,143	0,523	0,143	0,001	-0,124	0,080	0,777
Profit	-0,744	0,078	-0,086	0,860	0,071	0,148	-0,266	0,132	0,923

Based on table 4 of the cross loading test above shows that each indicator has a higher correlation to the construct measured than other constructs (latent variables) so that it can be concluded that all indicators have good discriminant validity. In addition to cross loading, the discriminant validity test can also be done with the fornell lacker criterion test.

Table 5 : Fornell Lacker Criterion Testing

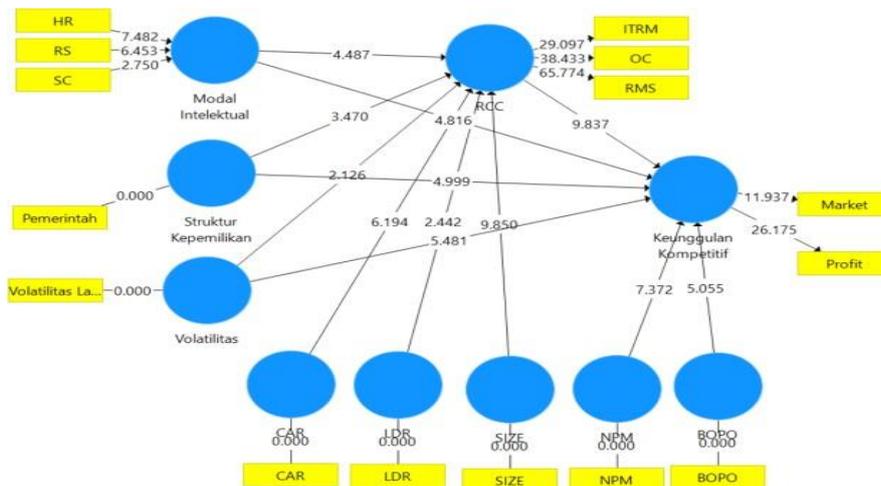
	BOPO	Car	Competitive Advantage	LDR	NPM	Risk Culture Chain	Size	Ownership Structure	Profit Volatility
BOPO	1,000								
Car	-0,092	1,000							
Competitive Advantage	-0,709	0,144	0,853						
LDR	-0,247	0,185	-0,124	1,000					
NPM	-0,692	0,106	0,844	-0,212	1,000				
Risk Culture Chain	-0,102	-0,029	0,130	0,006	0,142	0,809			
Size	-0,159	-0,263	0,106	-0,010	0,184	0,639	1,000		
Ownership Structure	-0,073	0,072	0,113	0,010	0,040	-0,391	-0,431	1,000	
Profit Volatility	0,336	-0,126	-0,245	-0,041	-0,418	-0,131	-0,171	-0,052	1,000

Based on table 5 fornell lacker testing above shows that all constructs have a higher AVE root value than the correlation between the construct and other constructs, it can be concluded that each construct has a good discriminant validity...

Structural Model Testing (Inner Model)

A structural model is a model that connects exogenous latent variables with endogenous latent variables or endogenous variable relationships with other endogenous variables. Here are the results of the full structural model estimation with the bootstrapping method.

Figure 4: Full Structural Model Results (Bootstrapping)



From the test results contained in figure 4 of the full structural reduction model (PLS Algorithm) above obtained structural model equations as follows:

$$RCC = 0,250 MI - 0,101 SK - 0,052 VL + 0,155 CAR - 0,077 LDR + 0,540 SIZE$$

$$KK = -0,149 MI + 0,199 SK + 0,201 VL + 0,540 RCC + 0,390 NPM - 0,253 BOPO$$

Information:

- RCC : Risk Culture Chain
- SK : Ownership Structure
- KK : Competitive Advantage
- VL : Profit Volatility
- CAR, LDR, SIZE, NPM, BOPO: Control variable
- IC : Intellectual Capital

1. R-Square Test

The value of R-squares can be used to determine the magnitude of the variability of endogenous variables that can be explained by exogenous variables. Here are the results of the R-square value for each endogenous variable.

Table 6: R-Square Test Results

Endogenous Variables	R Square	Adjusted R-Square
Competitive Advantage	0,684	0,680
Risk Culture Chain	0,489	0,483

Based on table 6 above, it can be known the acquisition of R-square values for the Risk Culture Chain variable of 0.489. This shows that the Risk Culture Chain can be explained by 48.9% by the Variables of Intellectual Capital, Ownership Structure and Profit Volatility with CAR, LDR and SIZE as control variables. The remaining 51.1% was influenced by other variables that were not studied.

Then the R-square value for the Competitive Advantage variable is 0.684. This shows that Competitive Advantage can be explained by 68.4% by the variables of Intellectual Capital, Ownership Structure, Profit Volatility and Risk Culture Chain with NPM and BOPO as control variables. The remaining 31.6% was influenced by other variables that were not studied.

Goodness of Fit Test

In this study the overall fit index used a goodness of fit criterion developed by Tenenhaus et al (2004) called the GoF Index. GoF is a measure developed to validate the combined performance between the outer model and the inner model. GoF values are obtained from the average communalities index multiplied by the value of R² (Ghozali & Latan, 2015). The GoF value consists of a range of 0 to 1, with an interpretation of the values i.e.: 0.1 for a small GoF; 0.25 for moderate or moderate GoF; and 0.36 for large GOF. Here are the results of the GoF Index calculation.

$$Gof = \sqrt{\text{Average Communalities} \times R^2}$$

$$Gof = \sqrt{0,899 \times 0,616} = 0,554$$

From the calculation results obtained gof value of 0.554 > 0.36 so that it falls into the large category.

Discussion of Research Test Results

After the measurement model test and structural model test, it can be continued for hypothesis testing to answer research questions. In this study there are 7 hypotheses, here are the results of statistical test recapitulation for hypothesis testing.

Table 7: Hypothesis Test Results

Hypothesis		Relationship	Path	t statistic	P-Value	Conclusion
1	+	Intellectual Capital -> Risk Culture Chain	0,250	4,487	0,000*	Accepted
2	-	Ownership Structure -> Risk Culture Chain	-0,101	3,470	0,001*	Rejected
3	+	Profit Volatility -> Risk Culture Chain	-0,052	2,126	0,017**	Accepted
4	-	Intellectual Capital -> Competitive Advantage	-0,149	4,816	0,000*	Rejected
5	+	Ownership Structure -> Competitive Advantage	0,199	4,999	0,000*	Accepted
6	-	Profit Volatility -> Competitive Advantage	0,201	5,481	0,000*	Rejected
7	+	Risk Culture Chain -> Competitive Advantage	0,540	9,837	0,000*	Accepted

1) The Effect of Intellectual Capital on the Risk Culture Chain

Based on the results of the research hypothesis test in table 7 states that intellectual capital consisting of relational capital, human capital, and structural capital can increase risk culture chain consisting of risk management strategy drives, organizational culture drive and IT risk management. In intellectual capital, human capital, humans have different knowledge, skills, religiosity, or personality and the ability of workers who create added value, and the better the risk culture chain system. This shows that to develop intellectual capital must be supported by a good chain of risk culture, so as to increase the value of intellectual capital. The

results of previous research examining the impact of intellectual capital on organizational performance in developing countries, namely Barkat (2018) stated that intellectual capital, relational capital has the strongest influence on knowledge process capabilities and organizational performance. Shaari research (2018) which states that intellectual capital has a positive and significant effect on organizational performance.

2) The Effect of Ownership Structure on The Risk Culture Chain

Based on the results of the hypothesis test (H2) research in table 7 states that the ownership structure has a negative and significant influence on the risk culture chain, meaning that the higher the ownership structure, the lower or the value of the risk culture chain owned by a company. The ownership structure in this study was measured by foreign, institutional, managerial and government ownership structures. In this study, the ownership structure with the largest shareholders was the government's ownership structure. The government's ownership structure has good corporate governance because it serves the public interest more than the interests of shareholders.

3) Effect of Profit Volatility on Risk Culture Chain

The results of this study showed that when profit volatility is high, the value of the risk culture chain decreases. Which consists of indicators of risk management strategy drives, organizational culture drives and IT risk management. The results of this study are in line with paligorova research (2011) which states that has a positive relationship between corporate risk takers as measured by profit volatility and the largest equity holdings of shareholders. Another study that is in line with the results of this study is Wijayanti (2018) which concluded that profit volatility has a positive and significant effect on profit quality.

4) The Influence of Intellectual Capital on Competitive Advantage

In this study, hypothesis 4 measured the magnitude of the influence of intellectual capital on competitive advantage. The results obtained state that intellectual capital affects competitive advantage, but in a negative direction. So the conclusion of the proposed hypothesis was rejected. In the results of this study shows an effect but with a negative direction which means that if intellectual capital increases then competitive advantage decreases, and vice versa. Disclosure of intellectual capital can create trust with employees and stakeholders, and can prevent rumors and issues that are unfavorable to the company. The results of this study support the Resource Based Theory theory which states that the creation of competitive advantage can be done through the use of resources to create added value for stakeholders. Companies that have their own unique resources and can control will have the ability to maintain their advantages over if the company buys or acquires its resources from outside the organization.

5) The Effect of Ownership Structure on Competitive Advantage

Ownership structure by some researchers is believed to be able to influence the course of the company which ultimately affects the company's performance in achieving the company's goal of maximizing the value of the company (Wiranata 2013). The government's ownership structure has more market access and has negar power. Investors believe that the sustainability

of the business of state-owned enterprises is supported by government policies. Ownership structure is believed to have the ability to influence the course of the company which can later affect the company's performance. Agency problems can be reduced by the existence of ownership structures. The results of this study are in line with the results of research conducted by Sun and Tong (2013) in Hunardy and Tarigan, (2017) found that government ownership has a significant positive influence on the financial performance of companies listed on the Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SSE), saifi research results (2019), racha research results (2019), Jallo (2017) and indrasari research results (2012) which suggests that government ownership is influential. Positive significance to financial performance.

6) Effect of Profit Volatility on Competitive Advantage

If the volatility of profits decreases, then the competitive advantage increases, and vice versa if the volatility of profits increases, then the competitive advantage decreases. According to Khurniaji and Raharja (2013) argued that profit volatility is a tool to measure the stability of profits obtained by the company. So, when the level of volatility of the company's profit rises then the investors quickly sell the company's shares. However, if the level of volatility in company profits decreases, potential investors quickly buy company shares. This is triggered because of the doubts of investors about the performance of the company's managers. Company theory recognizes profit maximization as the company's main target. First maximize short-term profit. In the long run, maximize the expected value (expected value value). The main goal of a company according to the theory of the firm is to increase the value of the company (value of the firm) (Salvatore, 2005). The value of the company is very important because with a high company value will be followed by the high prosperity of shareholders (Brigham dan Houston, 2011). According to Husnan & Pudjiastuti (2006) the value of the company is the price that is willing to be paid by prospective buyers if the company is sold.

7) The Effect of Risk Culture Chain on Competitive Advantage

If the risk culture chain decreases, then the competitive advantage increases, and vice versa if the risk culture chain increases, then the competitive advantage decreases. Based on the results obtained when the company runs a risk culture chain consisting of risk management strategy indicators, organizational culture, and IT risk management, the company can increase competitive advantage so that profits increase. Risk culture chain is a whole and inseparable unity, because in the risk culture chain with this latest concept adds a dimension of IT risk management. The results of this study are not in line with the results of research Zhai Cao et al (2015), which stated that hierarchical culture has a negative relationship with integrase and customers. The results of this study are in line with the results of Benjamin's research (2013) risk culture has a positive relationship with banking performance in Ghana. Researchers also conducted a media test that aimed to determine the indirect effect of intellectual capital on competitive advantage through risk culture chain, the influence of ownership structure on competitive advantage through risk culture chain, and the influence of profit volatility on competitive advantage through risk culture chain can be seen in the following table:

Table 8: Mediation Test Results

Hypothesis	Relationship	Path (Indirect effect)	t statistic	P-Value	Conclusion
1	Intellectual Capital -> Risk Culture Chain -> Competitive Advantage	0,135	4,861	0,000	Accepted
2	Ownership Structure -> Risk Culture Chain -> Competitive Advantage	-0,054	3,305	0,001	Accepted
3	Profit Volatility -> Risk Culture Chain -> Competitive Advantage	-0,028	2,113	0,018	Accepted

1) The Influence of Intellectual Capital on Competitive Advantage through Risk Culture Chain

Based on indirect effect results showed that the indirect influence of intellectual capital on competitive advantage through the risk culture chain obtained a path coefficient of 0.135 with a statistical t value of 4,861 with a P-value of 0.000. Since the p value is smaller than 0.05 and the statistical t value is greater than the table t value of 1.65, it is significant. This shows that intellectual capital indirectly has a significant effect on competitive advantage through the risk culture chain. This means that the risk culture chain has a significant influence in mediating intellectual capital relations with competitive advantages. The higher the risk culture chain caused by increased intellectual capital, it will have an impact on increasing competitive advantage.

2) Influence of Ownership Structure on Competitive Advantage through Risk Culture Chain

Based on indirect effect results showed that the indirect influence of ownership structure on competitive advantage through risk culture chain obtained a path coefficient value of -0.054 with a statistical t value of 3,305 and a P-value of 0.001. Since the p value is smaller than 0.05 with a statistical t greater (3,305) than the table t value (1.65) it is significant. This shows that ownership structure indirectly has a significant effect on competitive advantage through the risk culture chain. This means that risk culture chain has a significant influence in mediating the relationship of ownership structure with competitive advantage. The higher the risk culture chain due to the increased ownership structure will have an impact on increasing competitive advantage.

3) Effect of Profit Volatility on Competitive Advantage through Risk Culture Chain

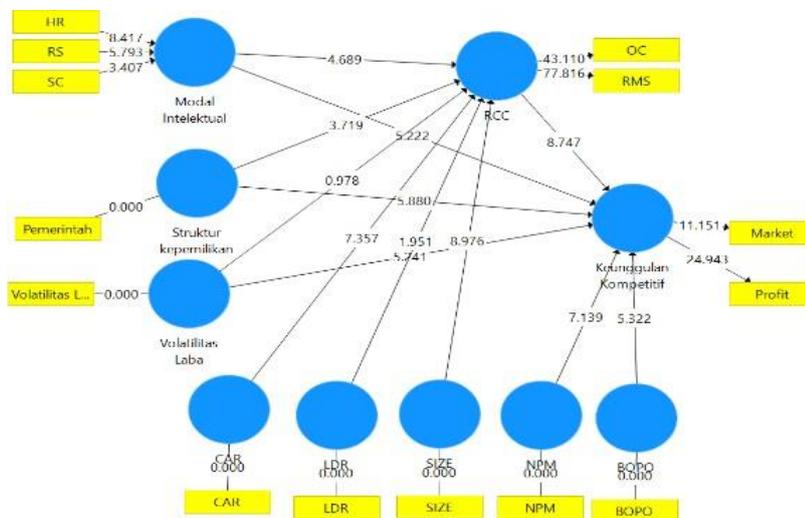
Based on indirect effect results showed that the indirect influence of profit volatility on competitive advantage through the risk culture chain obtained a track coefficient of -0.028 with a statistical t value of 2,113 and a P-value of 0.018. Since the p value is smaller than 0.05 with a statistical t (2.113) greater than t table (1.65), it is significant. This shows that profit volatility indirectly affects competitive advantage through risk culture chains. This means that the risk culture chain has a significant influence in mediating the relationship of profit volatility with competitive advantage. The higher the risk culture chain caused by low intellectual capital will have an impact on increasing competitive advantage.

4) Sensitivity Test Analysis

Testing sensitivity analysis of statistical test results from hypotheses 1 to 7 still needs to be tested for reliability. The hypothesis model that has been tested above will be tested again, namely the risk culture chain variable. The risk culture chain variable in this study has 3 dimensions, namely risk management strategy drives, organizational culture drives, and IT risk management. Risk culture chain variables that will be tested without including the IT risk management dimension which is a novelty in this study.

1. Structural Model Testing (Inner Model)

Figure 5 : Results of Structural Model (Boostraping) Sensitivity Test



Based on the test results obtained structural model equations as follows:

$$RCC = 0,285 MI - 0,111 SK - 0,025 VL + 0,200 CAR - 0,065 LDR + 0,518 SIZE$$

$$KK = -0,157 MI + 0,216 SK + 0,186 VL + 0,537 RCC + 0,368 NPM - 0,247 BOPO$$

Information:

- | | | | |
|----------------------------|-------------------------|----|------------------------|
| RCC | : Risk Culture Chain | SK | : Ownership Structure |
| KK | : Competitive Advantage | VL | : Profit Volatility |
| CAR, LDR, SIZE, NPM, BOPO: | Control variable | IC | : Intellectual Capital |

2. Sensitivity Test Results

The results of the sensitivity test in this study were conducted to look at the influence of intellectual capital, ownership structure and profit volatility on competitive advantage with intervening risk culture chain variables. In the model test to be tested is a risk culture chain variable when using the IT Risk Management dimension by not using IT Risk Management. The results of the sensitivity test can be seen in the table below

Table 9: Sensitivity Test Table

Hypothesis		Relationship	Path	t statistic	P-Value	Conclusion
1	+	Intellectual Capital -> Risk Culture Chain	0.285	4.689	0.000	Accepted
2	+	Ownership Structure -> Risk Culture Chain	-0.111	3.719	0.000	Rejected
3	-	Profit Volatility -> Risk Culture Chain	-0.025	0.978	0.156	Rejected
4	+	Intellectual Capital -> Competitive Advantage	-0.157	5.222	0.000	Rejected
5	+	Ownership Structure -> Competitive Advantage	0.216	5.880	0.000	Accepted
6	-	Profit Volatility -> Competitive Advantage	0.186	5.241	0.000	Rejected
7	+	Risk Culture Chain -> Competitive Advantage	0.537	8.900	0.000	Accepted

3. R-Square Test

Table 10: R-Square Test Results (Sensitivity)

Endogenous Variables	R Square Uses IT Risk Manj	R Square Without IT Risk Manj
Competitive Advantage	0,684	0,680
Risk Culture Chain	0,489	0,497

Judging from the R-squared score in table 9 above shows almost the same results and there is no difference very far in the first model of R-squared risk culture chain by using IT Risk Management of 0.489 and in the second model R-squared risk culture chain without IT Risk Management 0.497. This condition illustrates that the difference in value from R-Square is very small once greater before adding IT Risk Management. In the annual report, the disclosure of information about IT Risk Management is not complete in its disclosure and the risks managed include ownership, operations, and about IT security and IT audits. IT security has not been explained about hackers, customer financial security, and when there is a human error against customer accounts. Human error of customer money often occurs. For example, the case of Bank Mandiri customer balance can instantly increase and decrease and the case of Bank BRI an employee can move or take customer money either by using an ATM or moving balances between accounts, and immediately the money in the customer's account runs out.

5. Development Test Results

Based on the test results using SPSS obtained the following results:

Table 11 Development Model Test Results

Substructure	Independent Var	t count	Sig	Conclusion
1. (Dependent: RCC)	Intellectual Capital	1.582	0.114	Rejected
	Government Decree	1.037	0.300	Rejected
	Foreign Sk	0.612	0.541	Rejected
	Institutional SK	2.933	0.004	Accepted
	SK Managerial	2.247	0.025	Accepted
	Volatilitas_Laba	-1.655	0.099	Rejected
	CAR	3.427	0.001	Accepted
	LDR	-0.430	0.667	Rejected
	SIZE	17.651	0.000	Accepted
2. (Dependent: KK)	Intellectual Capital	5.812	0.000	Accepted
	Government Decree	-4.275	0.000	Accepted
	Foreign Sk	-2.265	0.024	Accepted
	Institutional SK	-3.202	0.001	Accepted
	SK Managerial	-2.080	0.038	Accepted
	Volatilitas_Laba	-2.145	0.032	Accepted
	RCC	-1.243	0.214	Rejected
	NPM	-2.536	0.012	Accepted
	BOPO	-6.058	0.000	Accepted

The results of this development test aim to find out which ownership structure is the best. The results of the development model test using SPSS version 22 in table 11 state that the results for the ownership structure variable, significant results are in the institutional ownership structure and managerial ownership structure in the one research model with a dependent risk culture chain variable. In the second research model as a dependent variable, significant results are found in all ownership structures, namely the structure of Government Ownership, Foreign Ownership Structure, Institutional Ownership Structure, and Managerial ownership structure but in a conflicting direction that is negative.

CONCLUSION

This chapter will be outlined on the results of conclusions and suggestions based on the results of research and discussions outlined in previous chapters on the influence of intellectual capital, ownership structure and profit volatility on competitive advantage with intervening risk culture chain variables. The results of the first hypothesis (H1) test were accepted, concluded that there is a positive and significant influence of intellectual capital on the risk culture chain. due to the

acquisition of a regression coefficient marked positively. The results of the second hypothesis (H2) test were rejected, concluding that there was a negative and significant influence of ownership structure on the risk culture chain. The results of the third hypothesis (H3) test were accepted, concluding that there was a negative and significant influence of profit volatility on the risk culture chain. The results of testing the fourth hypothesis (H4) were rejected, concluding that there is a negative and significant influence of intellectual capital on competitive advantage.

The results of the fifth hypothesis (H5) test were accepted, concluding that there is a positive and significant influence of ownership structure on competitive advantage. The results of the sixth hypothesis (H6) test were rejected, concluding that there is a positive and significant influence of profit volatility on competitive advantage. The results of the seventh hypothesis (H7) test were accepted, concluding that risk culture chain has a significant positive effect on competitive advantage. From the results of mediation testing, it can be concluded that the risk culture chain has a significant influence in mediating intellectual capital relations with competitive advantages. The higher the risk culture chain caused by low intellectual capital will have an impact on the decreased influence of intellectual capital on competitive advantage. Limitations of this study, the measurement of intellectual capital disclosure variables in the company's annual report has not revealed the overall matter of human capital, relation capital, structural capital and the limited disclosure of IT Risk Management indicators about IT security.

This research still has shortcomings and can be continued by subsequent researchers by providing completeness to the risk culture chain measurement. Further research can add indicators to the risk culture chain, so that it becomes more complete and the addition of other independent variables. As well as the recommendations of further researchers using samples on manufacturing companies and comparing the performance of STATE-OWNED banks with Private Banks.

References

- Agarwal, A., Gupta, A., Kumar, A., & Tamilselvam, S. G. (2019). Learning risk culture of banks using news analytics. *European Journal of Operational Research*, 277(2), 770–783. <https://doi.org/10.1016/j.ejor.2019.02.045>
- Ahmad Arabiyat, A.-K., & Ibraheem Hasouneh, A.-B. (2018). The Impact of Intellectual Capital on achieving Competitive Advantages within commercial banks in Jordan. 84.
- Althonayan, A., Killackey, H., & Keith, J. (2012). ERM Culture Alignment to Enhance Competitive Advantage.
- Arifin, J. (2016). The Influence Of Intellectual Capital On Financial Performance Of Bank Sector Companies Listed At Jakarta Stock Exchange In Period 2008 - 2012. *Jurnal AdBispreneur*, 1(3), 195–206
- Bui, D. G., Fang, Y., & Lin, C. Y. (2018). The influence of risk culture on firm returns in times of crisis. *International Review of Economics and Finance*, 57, 291–306. <https://doi.org/10.1016/j.iref.2018.01.015>
- Bushman, R. M., Davidson, R. H., Dey, A., & Smith, A. (2018). Bank CEO materialism: Risk controls, culture and tail risk. *Journal of Accounting and Economics*, 65(1), 191–220. <https://doi.org/10.1016/j.jacceco.2017.11.014>

- Chacón Vargas, J. R., Moreno Mantilla, C. E., & de Sousa Jabbour, A. B. L. (2018). Enablers of sustainable supply chain management and its effect on competitive advantage in the Colombian context. *Resources, Conservation and Recycling*, 139(April), 237–250. <https://doi.org/10.1016/j.resconrec.2018.08.018>
- Chen, M. C., Cheng, S. J., & Hwang, Y. (2005). An Empirical Investigation of the Relationship between Intellectual Capital and Firms' Market Value and Financial Performance. *Journal of Intellectual Capital*, 6(2), 159–176. <https://doi.org/10.1108/14691930510592771>
- Dietrich, M., & Krafft, J. (2012). Economics and Theory of the Firm, Chap. 1 of the Handbook on Economics and Theory of the Firm, M. Dietrich and Jackie Krafft (eds), Edward Elgar : Ding, H., Fu, Y., Zheng, L., & Yan, Z. (2019). Determinants of the competitive advantage of dairysupply chains: Evidence from the Chinese dairy industry. *International Journal of Production Economics*, 209, 360–373. <https://doi.org/10.1016/j.ijpe.2018.02.013>
- Elahi, E. (2013). How Risk Management Can Turn into Competitive Advantage: Examples and Rationale. *Foresight*, 15(2), 117–131. <https://doi.org/10.1108/14636681311321121>
- Fiechter, P. 2011. The Effects of the Fair Value Option under IAS 39 on the Volatility of Bank Earnings. *Journal of International Accounting Research*, Vol. 10, No. 1: 85-108
- Hakkak, M. (2015). Development of a Sustainable Competitive Advantage Model Based On Balanced Scorecard. *International Journal of Asian Social Science*, 5(5), 298–308. <https://doi.org/10.18488/journal.1/2015.5.5/1.5.298.308>
- Herdyanto, I., & Nasir, M. (2013). Pengaruh Intellectual Capital pada Financial Performance Perusahaan (Studi Empiris pada Perusahaan Infrastruktur , Utilitas , dan Transportasi yang Terdaftar di Bursa Efek Indonesia Tahun 2009-2011). *Journal of Accounting*, 2(3), 1–10.
- Jaffer, A. (2010). Risk Management Integrating Risk and Strategy to Derive Competitive. 18. Kpodo, B., & Agyekum, K. (2015). The Effects of Risk Culture on Organisational Performance - The Cases of Some Selected Financial Institutions in Ghana. *International Journal of Science and Research (IJSR)*, 4(12), 681–689. <https://doi.org/10.21275/v4i12.nov152020>
- Li, Y., Chen, Y. K., Chien, F. S., Lee, W. C., & Hsu, Y. C. (2016). Study of optimal capital adequacy ratios. *Journal of Productivity Analysis*, 45(3), 261–274. <https://doi.org/10.1007/s11123-016-0469-z>
- Marko Sarstedt, Christian M. Ringle, and J. F. H. (2017). Partial Least Squares Structural Equation Modeling Marko. In *Handbook of Market Research* (Issue September). <https://doi.org/10.1007/978-3-319-05542-8>
- McGaughey, R. E., Snyder, C. A., & Carr, H. H. (1994). Implementing Information Technology for Competitive Advantage: Risk Management Issues. *Information and Management*, 26(5), 273–280. [https://doi.org/10.1016/0378-7206\(94\)90066-3](https://doi.org/10.1016/0378-7206(94)90066-3)
- Moslemany, R. El, & Nathan, D. (2016). Ownership structure and Earnings Management: evidence from Egypt. *International Journal of Accounting and Information Management*, 24(2), 135–161. <https://doi.org/10.1108/IJAIM-06-2015-0031>
- Saifi, M. (2019). Pengaruh Corporate Governance Dan Struktur Kepemilikan Terhadap Kinerja Keuangan Perusahaan. *Skripsi Universitas Brawijaya*, 2, 1–11.
- Schroeder, R. G., Bates, K. A., & Junntila, Mi. A. (2002). A Resource-Based View of Manufacturing Strategy and the Relationship to Manufacturing Performance. *Strategic Management Journal*, 23(2), 105–117. <https://doi.org/10.1002/smj.213>
- Sigalas, C. (2015). Competitive advantage: the known unknown concept. *Management Decision*, 53(9), 2004–2016. <https://doi.org/10.1108/MD-05-2015-0185>

- Sigalas, C., & Pekka-economou, V. (2013). Developing a Measure of Competitive Advantage. February 2013. <https://doi.org/10.1108/JSMA>
- Sigarlaki, P., Karamoy, H., & Elim, I. (2014). Analisis Net Profit Margin pada Perusahaan Depot Air Minum di Lingkungan Kampus Universitas Sam Ratulangi. *Jurnal EMBA*, 2(2), 1617–1625.
- Silva, M. de L. R. da, Cabrita, M. do R. M. F., Rodrigues, A. M. G., & Dueñas, M. del P. M. (2018). Online disclosure of intellectual capital: an analysis of the Iberian banks? *4(2)*, 111–128.
- Wijayanti, R., & Diyanti, V. (2017). Pengaruh Volatilitas Laba, Perataan Laba dan Corporate Governance terhadap Kualitas Laba Bank Syariah dan Konvensional. *Jurnal Akuntansi Dan Investasi*, 18(1), 66–79. <https://doi.org/10.18196/jai.18161>
- Younas, Z. I., & Zafar, A. (2019). Corporate Risk Taking and Sustainability: a Case of Listed Firms from USA and Germany. *Journal of Global Responsibility*, 10(1), 2–15. <https://doi.org/10.1108/jgr-07-2018-0027>
- Zahro, M. (2014). Akuntansi Nilai Wajar, Volatilitas Laba, Dan Praktik Manajemen laba Pada Perusahaan Perbankan. *3(11)*, 0–24.