

# ECONOMY AND STRATEGY IMPACT TOWARDS PUBLICLY-TRADED COMPANIES FINANCIAL PERFORMANCE: A COMPARISON BETWEEN INDONESIA & GERMANY

# UNDERGRADUATE THESIS PROPOSAL

# GYDA TERTIA AZARINE BUDIYATI 11201508017

Submitted to fulfill the requirement of the undergraduate degree program

Department of International Business Administration Faculty of Business & Social Sciences

> BSD City, Serpong, Tangerang, Indonesia May 2018





## **APPROVAL PAGE**

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> Acknowledged by; BSD City, Serpong, Tangerang, Indonesia May 2018

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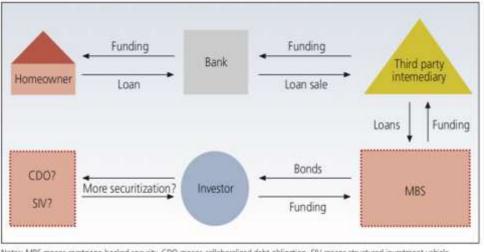
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## CHAPTER 1 INTRODUCTION

#### I. 1. BACKGROUND

The last global financial crisis back in 2008 was considered the biggest financial calamity since the great depression 1929. The failure in risk management within the U.S. banking community, rating agencies, reckless worldwide investors, insurance companies, and U.S. government were the key reasons of the 2008 global crisis (Economics, 2016). Looking further even before 2008, the first sign of the problematic economy occurred in 2006 when the U.S. housing prices started to fall.



**Figure 1: Mortgage Funding Process** 

Notes: MBS means mortgage-backed security. CDO means collaberalized debt obligation. SIV means structured investment vehicle. Sumber: The Federal Reserve Bank of Chicago, Chicago Fed Letter: "The role of securitization in mortgage lending", November 2007

Source: (Bank of Indonesia, 2009)

To begin the story of the fall in housing prices, investors all around the world were looking for a low risk higher return investment and decided to invest in mortgages on U.S. housing market. There are a few basic reasons on why global investors putting their money in U.S. mortgages (1) mortgage-backed securities are created means large financial institutions securitize mortgages (2) the expectation of getting a higher return than in any other places (3) credit ratings agency gave AAA ratings for the project, encouraging global investors by basically saying that the project is safe. Banks were the managers of this mega project. What so-called "Too Big to Fail" Banks were building houses and give mortgages down to people in U.S. and sold the mortgages up to investors all around the world. The thing about mortgages is when a person who borrows money to buy a house can not pay the monthly installment, whoever has the paper mortgage, or in this situation the global investors, owns the house. The realtors applauded as they thought the overheated housing market will eventually return to a better sustainable level as the project gets even bigger, or when things go wrong they can just sell the house in an even greater price than the interest in mortgages. What

they did not realize were there were too many homeowners with questionable credit (Muller, 2015).

Banks were allowing people to take out loans for an entire 100% for their new homes as it pushed by Community Reinvestment Act to make investments especially in subprime areas. However, The Gramm-Rudman Act was the true enemy. It allowed banks to take part in trading profitable derivatives which they sold to investors as these are mortgage-backed securities needed home loans as collateral. The derivatives created an intriguing demand for more and more mortgages. The Federal Reserves did not realize how far the damage of the subprime mortgage crisis would spread. The Fed was expecting that the subprime mortgage crisis remains limited to the housing sector. Hedge funds and other financial institutions world-wide owned those mortgage-backed securities in other forms such as mutual funds, corporate assets, and pension funds. The banks even chopped up the original mortgages and resold them in tranches making the derivatives far from possible to price (Amadeo, 2018).

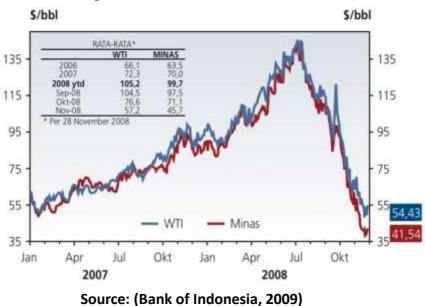
The existence of a bubble theory finally grasps the economy. The housing bubble is finally taking places when the following happened in its sequence (1) people just could not pay for their incredibly expensive houses or keep up with their ballooning mortgage payments (2) borrowers start defaulting which putting more houses in the market for sale (3) but there were no buyers (3) so supply was up, demand was down, and home prices start collapsing (4) as price fell, some borrowers suddenly have a more expensive mortgage and stop paying which create more defaults (5) the home prices collapsing even more. As this was happening, the large financial institutions stopped buying subprime mortgages and subprime lenders were getting stuck with bad loans. By 2007, some very large institutions had declared bankruptcy. But this were not the end. AIG insurance company was previously sold tens of millions of dollars insurance policies called credit default swaps to protect investors in housing mortgages for when things go wrong. Shockingly, AIG has no money to back investors up when things actually went terribly wrong. Little does anybody knows, all the players among the investments had created an incredibly complicated web of assets, liability, and risk. So when things went bad, it went bad for the entire financial system thanks to the housing bubble (Muller, 2015).

Skenario	Penyerapan tenaga kerja (%)			
Skenario	Seluruh sektor	Sektor Industri		
Ekspor seluruh sektor turun 1%	-0,166	-0,416		
Ekspor sektor pertanian turun 1%	-0,009	-0,001		
Ekspor sektor pertambangan turun 1%	-0,005	-0,002		
Ekspor sektor industri turun 1%	-0,091	-0,400		

#### Figure 2: The Impact of Decreasing Exports on Labor Absorption

Source: (Bank of Indonesia, 2009)

In Indonesian perspective, global crisis has another story ranging from the rise of oil prices to the rise of unemployment. The rise in oil prices causing an increase in prices of goods worldwide. The rise in unemployment creating global inflation. Additionally, credit crisis and the bankruptcy of multiple bank investors around the world were successfully made things even worse (Sukotjo, 2015).





At the time United States experiencing a serious recession, United States decreased in purchasing power was affecting worldwide trading and thus economy. The negative impacts of United States low purchasing power towards Indonesian economy in 2008 were (1) a deficit in Indonesia's Balance of Payment of US \$ 2.2 billion (2) pressure in exchange rate; IDR weakened 16.5% to USD (3) inflation in Indonesian CPI reached 11.06% compare to the international inflation 8.29% due to rapid changes in world oil price (Alena, 2011).

Based on the study by Bank of Indonesia, the impact of the global financial crisis to Indonesia is transmitted more through trades or macroeconomics than financials. The low intensity of the crisis impact through direct financial channels is partly due to the low placement of domestic banking funds to the troubled assets of the global financial market. The bad news was saved partly by various Bank Indonesia's regulations that impose limits on activities conducted by banks. The impact which spread through trade channels has the potential to significantly affect the national economy as it is inseparable from the characteristics of Indonesian exports (1) dominated by primary commodities and (2) export destinations that are less diversified. From the sectoral perspective, the contraction will soon be seen in the tradeable sectors, which is also the largest employment absorber sector. The waves of job losses, which are already beginning to happen, are expected to continue. This condition will in turn reduce the share of labor in national income. Based on the mapping of the national income distribution, there is an indication of the strong linkage between labor share in national

income and the movement of public consumption. A wave of job losses if it continues to happen will lead to a significant decline in public consumption. The disruption of real sector performance further potentially increases the intensity of crisis transmission through financial channels indirectly in the form of inhibition of the ability to finance the economy. For banks, sluggish business activity and widespread layoffs could potentially increase non-performing loans (NPLs) of banks and in the future will hold banks in disbursing credit. In terms of business actors, poor economic performance will also impact on the decline in the level of business profit, which has been one source for financing its business. This condition will ultimately restrain business actors in expanding their business so that economic growth will experience slowdown (Bank of Indonesia, 2009).

During the period of 2008 global economy crisis, PT Mustika Ratu Tbk experienced a rather odd circumstance. A study was comparing PT Mustika Ratu Tbk financial performance before and after global crisis. The findings are (1) PT Mustika Ratu Tbk faces losses for the last 3 periods before 2008 crisis, indicates that the company has not been able to create economic value and meet the expectations of the investors (2) only 2 years after the global crisis in 2010 the company was able to turned the table, means it finally created economic value (Sukotjo, 2015). The cost of capital that went higher than net operating profit after tax (NOPAT) is the main reason of EVA < 0 in 2005-2007. On the other hand, the main reason for EVA > 0 in 2010-2011 was the NOPAT went higher than the cost of capital. Economic value represents the values created through the usage of its assets (Investopedia, 2018) This phenomenon was showing an unusual state of profitability where PT Mustika Ratu Tbk was facing loses since a few years before global crisis and then finally gains profit after two years the global crisis.

During economic downturn, the economic situation is characterized by great uncertainties especially on the direction of technological change, demand conditions, and new market opportunities. Large established firms in these situation are better equipped to manage a situation of fall in demand and lack of financial supply in the market. In a matter of fact, this is not always be the case. Based upon a study of Birkbeck University of London, the 2008 economic crisis has significantly reduce the number of European firms' willingness to increase innovation investment. The number shows reduction from 38% to only 9% firms that are willing to increase its innovation investment during economic crisis. However, the 9% shows the anomaly of these firms which still expanding their innovation investment. It stated that younger firms are tend to be included in the 9% anomaly, technological opportunities are no longer a positive impact on investment during recession, and the innovation focuses on opportunities in new markets above else. The research conclude that what matter are not large size and internal R&D behind the decision of increasing innovation investment, but flexibility, collaborative arrangements and exploration of new markets (Archibugi, Filippetti, & Frenz, 2012).

Based on the stories discussed, it becomes rather fascinating to see more of the relationship between economy condition, innovation strategy, and companies

performance. The following study will review the literature studies and analyse some data set. Whether or not those variables have significant impact on one another is the result to be expected.

### I. 2. RESEARCH PROBLEMS

The following are several research problems that are to be investigated in the study;

- 1. To identify the level of influence of macro economy indicators (GDP, Interest Rate, CPI) towards publicly-traded companies' performances within the consumer goods industry.
- 2. To identify the level influence of a company's strategy (innovation and diversification) towards publicly-listed companies' performances within the consumer goods industry.
- 3. To compare the parallel relationship of macro economy, strategy, and financial performance between Indonesia and Germany.

### I. 3. RESEARCH QUESTIONS

Referring to the research problems mentioned, the following research questions are formulated;

- 1. Question #1: How significant does macro economy indicators (GDP, Interest Rate, CPI) affects companies' performance?
- 2. Question #2: How significant does strategy (innovation and diversification) affect companies' performance?
- 3. Question #3: With regards to the influence level, is there any significant differences between the research result in Indonesia and Germany?

#### I. 4. RESEARCH PURPOSES

The objectives of the research are as follows;

- 1. The main objective is to identify and analyze the influence of macro economy indicators (GDP, Interest Rate, CPI) and companies' performance as well as strategy (innovation and diversification) and performance. The significance of knowing the relationship between macro economy and financial performance is to make decision by taking account the macro economy condition. The significance of understanding the relationship between strategy and performance is to determine appropriate decision tools inside a company.
- 2. Once the relationship is proven to be existing and affecting at least one of another, the second objective is to compare the application in Indonesia and Germany. The perspective to be obtained is the impact levels between developed and developing countries. Therefore, the significance is in acquiring more comprehensive view of the relationship between macro economy, strategies, and financial performance.

### I. 5. RESEARCH SCOPE AND LIMITATIONS

The study is limited as follows;

- 1. According to Jakarta Stock Exchange Industrial Classification (JASICA) there are 9 broad sectors in which companies are categorized. Among those broad sectors the subsectors are following each one of them. This research focuses only on the broad sector of consumer goods industry.
- 2. The financial performance analysis only focuses on the basics performance indicators; net sales (revenue) and cost of sales (cost of goods sold) as both of the indicators are the core business performance indicators in manufacturing companies.
- 3. The time limitation of the study is 2 years, starting from 2018. While the research covers the data analyses from 2014 to 2018. The locations are limited to Indonesia and Germany only.

### I. 6. REPORT STRUCTURE

This research is divided into five main chapters and each chapter is followed by several sub chapters as follows:

- 1. CHAPTER 1: Introduction with discussion on background, research problems, research questions, research purposes, research scope and limitations, and report structure.
- 2. CHAPTER 2: Literature Review which mostly explain and elaborate theories that is being used in analysis.
- 3. CHAPTER 3: Research Methodology discuss how the research is conducted and how the data is analyzed.
- 4. CHAPTER 4: Results and Discussion points out the final outcome of the research.
- 5. CHAPTER 5: Conclusion outlines the summary of the research.

## CHAPTER 2 LITERATURE REVIEW

#### II. 1. MACRO ECONOMY

Macroeconomics is the study of the country's aggregate economy that seek to understand how individual persons and firms' economic decision translated through markets to aggregate economic outcomes (Olsson, 2010). Variable of interest in macroeconomic are for example the level and change of gross domestic product, interest rate, inflation, consumer price index, unemployment, and many more. The macro economy affects individuals directly and indirectly as in individuals subjected to taxes, affected by bank interest rate, or receive subsidy from government. Macroeconomics is different with microeconomics fundamentally in the sense of different dependent variables. Microeconomics studies the behavior of individuals to understand individual choices while macroeconomic starts similarly with individual representatives but ultimately sum them up in aggregate outcomes on a national level.

#### **II. 1. 1. GROSS DOMESTIC PRODUCT**

Gross Domestic Product (GDP) measures the value of all final output in the form of both goods and services that produced domestically in a specific interval of time (Andolfatto, 2015). GDP matters to economists and policy makers because the larger or higher the levels of production means the larger or higher the material living standards. It is to be noted that GDP measures only the production of final goods and services, it does not include intermediate goods which constitutes materials that are used as inputs in the construction of final goods or services.

#### II. 1. 2. INTEREST RATE AND BI RATE

The Keynesian theory of interest rate mentioned market interest rate as the rate governing the terms on which funds are being currently supplied. Another literature mentioned it as the reward for parting with liquidity for a special period of time. The interest rate is a measure of unwillingness of those who possess money to part with their liquid control over it (Appelt, 2016). Interest rate facilitates the flow of funds from lenders to borrowers and affects the amount of loanable funds, level of consumption, and level and pattern of investment (Yakubu, Ogunleye, Sunday, & Ahmadu, 2016).

Bank of Indonesia Rate or BI Rate is a policy rate that reflects the stance of monetary policy stipulated by Bank of Indonesia. The BI Rate is implemented in monetary operations conducted by Bank of Indonesia through liquidity management in the money market to achieve the operational targets of monetary policy. The operational targets of monetary policy are reflected in the development of the Overnight Interbank Money Market Rate (PUAB O / N). The movement in the interbank money market rate is expected to be followed by developments in deposit rates, and in turn bank lending rates. Taking into account other factors in the economy, Bank Indonesia will generally raise the BI Rate if future inflation is predicted to exceed the predetermined target, whereas Bank Indonesia will lower the BI Rate if future inflation is predicted to fall below pre-determined targets. Bank Indonesia is strengthening the

monetary operations framework by introducing a new BI rate policy rate or BI 7-Day Repo Rate, which will be effective on August 19, 2016. In addition to the current BI Rate, the introduction of the new policy rate is not change the monetary policy stance being applied. This is so that policy rates can quickly affect the money market, banking and real sector. The 7-Day BI Repo Rate instrument as a new reference has a stronger relationship to the money market interest rate, transactional or traded in the market, and encourages the deepening of financial markets (Bank Indonesia, 2013).

#### **II. 1. 3. INFLATION AND CONSUMER PRICE INDEX**

Inflation is the situation when price level for products and services in a country goes up. The problems happen when inflation occurs but not adequately matched with increase in people's income. Inflation has various influence from the obvious one, where prices of products increase, to not to obvious one, the monetary policy (Kasperkevic, 2018).

The consumer price index (CPI) measures the rate at which the prices of consumer goods and services are changing over time (Church, 2016). CPI is one of the oldest and best-known statistical indicators for economic and social policymaking and has valuable and comprehensive implications for governments, businesses, and households. Most of the time CPI helps measure a country's inflation as it required several price indices to form an overall view of the inflation prevalent in the national economy.

#### II. 2. STRATEGY

Strategy is a word that interpreted differently as it being used very often in various conditions and places without having a universally accepted definition. In an individual-oriented definition, strategy is a very abstract attribute of the intricate human cognition that let us to position ourselves in life according to our personal goals. In organization perspective, strategy is a systemic and rational act of process which can be managed to succeed in achieving organization's goals. Strategy is broadly and generally described as a plan of action (Jofre, 2011).

#### **II. 2. 1. INNOVATION**

A product innovation is the introduction of a good or service which is new or significantly developed especially on its technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. Innovation may take on new uses or incorporate the existing technologies and knowledge. Technology is said to contribute the most in increasing production level, product characteristic, product value, and decrease product cost. It is generally believed that innovation strategy is very much helpful to increase a company's sustainability as the company putting abundance effort to create a better life for customers (Karabulut, 2015).

#### **II. 2. 2. DIVERSIFICATION**

Diversification is seen in various perspectives. Generally speaking, diversification is used by companies to grow or expand the business opportunities. Market diversification and product diversification are both effective growth strategies which come hand in hand with some risks. When a company extends its business offering to new market segments which not yet targeted before it is called market diversification. But when a company adds new products or services to expand the business offering within existing markets, it is called product differentiation (Kokemuller, 2017).

#### II. 3. PERFORMANCE

Financial statements or also known as annual reports are the companies' condensed performance report based on the accounting data which described in line with the generally accepted accounting principles such as IFRS. Financial statements function as an information center to stakeholders be it as shareholders, competitors, customers, analysts, or employee. The information shared in financial statements are about the financial vitality and the company's value. The basic starting point for a company's performance appraisal is the income statement. Sales, costs, and net income are particularly attractive for business analysts. However, to look only at one year's number alone is a unpreferable move. Instead, analysts often consider the historical numbers to then compare to the current number. Sometimes more than comparison, is also be used to find certain trends going on in a particular period of time. The study of comparing the percentage changes is called horizontal analysis (Schönbohm, 2013).

#### **II. 3. 1. SALES AND SALES GROWTH**

Revenues and goods or services sold are two equivalent terms to sales. Sales is the sum amount of money obtained from the sale of goods or services and also other business-related activities (Ferrell, Hirt, & Ferrell, 2014). One of the controversial issues in sales is typically the sales or revenue recognition. On the other hand, sales growth depicts how well or bad the business activity of a company improves or worsen over a certain period of time. Sales growth can be used in two different perspectives; (1) making decision to invest for investors and (2) analyzing whether or not the sales team is effective (Hessong, 2017).

#### II. 3. 2. COSTS

Two ways of increasing profitability are increasing sales and reducing costs. Cost of Goods Sold or COGS is the classic accounting terms that widely used. COGS include all direct costs and manufacturing overhead costs. Direct costs are in the form of material and wages while manufacturing overhead costs are based on the absorption costing logic (Schönbohm, 2013).

### II. 4. PREVIOUS STUDIES AND DIFFERENCES IN RESEARCH

T	itle of Research or Article Variables & Sub-Variables		Findings
1.	Effect of Macro- Economic Variables on Financial Performance Indicators (Cyril & Okechukwu, 2014)	Macro-economic: Monetary Policy Rate Exchange Rate Inflation Rate Financial Performance: EPS ROE ROA	<ul> <li>A positive significant relationship between MPR and EPS</li> <li>A weak negative relationship between exchange rate and company returns</li> <li>A weak negative relationship between inflation and ROE</li> </ul>
2.	The Effect of Macroeconomic Factors on Financial Performance of Commercial Banks in Kenya (Illo, 2012)	Macro-economic: <ul> <li>Lending Interest Rate</li> <li>Exchange Rate</li> <li>Inflation Rate</li> <li>GDP</li> <li>Money Supply</li> </ul> Financial Performance: <ul> <li>ROA</li> </ul>	<ul> <li>GDP growth influences ROA as much as 13%</li> <li>Inflation influences ROA as much as 0.09%</li> <li>Exchange rate to ROA influence is 0.08%</li> <li>Money supply to ROA influence is 1.22%</li> <li>Interest rate to ROA influence is 1.45%</li> </ul>
3.	Effects of Innovation Types on Performance of Manufacturing Firms in Turkey (Karabulut, 2015)	<ul> <li>Innovation Type:</li> <li>Product Innovation</li> <li>Process Innovation</li> <li>Organizational Innovation</li> <li>Marketing Innovation</li> <li>Firm Performance:</li> <li>Financial Performance</li> <li>Customer Performance</li> <li>Internal Business Process Performance</li> <li>Learning and Growth Performance</li> </ul>	<ul> <li>All the innovation subvariables have positive impact towards the entire firm performance subvariables except marketing innovation towards learning and growth performance</li> <li>The innovation type explains customer performance than other performance</li> </ul>
4.	Extensive Margin Adjustment of Multi-Product Firm and Risk Diversification	<ul> <li>Product Scope Adjustment</li> <li>Asset Pricing</li> <li>Product Turnover</li> <li>Financial Risks</li> <li>Asset Returns</li> </ul>	Multi-product firms with higher product turnover have lower financial risks and lower risk premia

#### **Table 1: Selected Previous Studies**

Т	Title of Research or Article Variables & Sub-Variables		Findings
	(Carvalho, Hong, & • Asset Volatility Zhou, 2017)		
5.	Product-Market Diversity, Resource Deployment, and Performance (Kaul, 2013)	<ul> <li>Product-market Diversification</li> <li>Wrigley Classification</li> <li>Entropy Measure</li> <li>Environment</li> <li>Industry-wise Classification</li> <li>Past performance</li> <li>Cash Flow</li> <li>ROA</li> <li>Ownership</li> <li>Foreign Equity Participation</li> <li>Firm-specific Variable:</li> <li>organizational dimension</li> <li>resource deployment dimension</li> <li>Performance</li> <li>ROA</li> <li>ROE</li> <li>Sales Growth</li> </ul>	<ul> <li>The diversification impact on performance depends on complex interaction between diversification strategy, corporate capabilities and resources, and external environment</li> <li>the examination of diversification and its effects on performance within an industry increases the overall explanatory power of the model</li> <li>the firm-specific effect is equally strong along with industry effect in determining inter-firm differences in ROA</li> </ul>
6.	Profitability and Cost in Growing Mango Orchards (Khuda, Hassan, & Akhter, 2014)	Costs Cost of Production Opportunity Cost Returns Net Present Worth Benefit Cost Ratio	Investment in mango cultivation can be considered substantial and economically justifiable
7.	Cost Management Practices and Firm's Performance of Manufacturing Organizations (Oluwagbemiga, Olugbenga, & Zaccheaus, 2014)	Costs <ul> <li>Direct Materials</li> <li>Direct Labour</li> <li>Production Overhead</li> <li>Administrative Overhead</li> </ul> Performance	<ul> <li>a positive significant relationship exists between cost management practices and firm's performance</li> <li>recommended a cost reduction strategy with emphasis on production</li> </ul>

Title of Research or Article	Variables & Sub-Variables	Findings
	<ul> <li>Profitability</li> </ul>	overhead cost and
	(Operating Profit)	administrative
		overhead cost

#### **Source: Various**

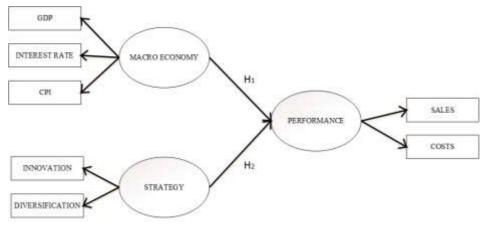
Considering the previous studies that listed above, this research is different in terms of the following facts:

- a) The sub-variables used in this paper are clearly different and more holistic than the previous studies which concentrate on either economy towards performance or strategy towards performance
- b) The industry which being concentrated on, the study focuses on consumer goods industry while most previous studies focus on other than that
- c) The locations and time which data being collected are different even though the research is expected to have similar but more holistic results
- d) Additional comparison analysis between two different locations (Indonesia and Germany) is being included in the research

#### II. 5. HYPOTHESES AND BASIC RESEARCH MODEL

In accordance with the background, research problem, research purpose, and everything previously discussed in chapter 1 and 2, it all lead to the formulation of hypotheses and basic research model. Hypotheses in this study are as follows;

- $\circ~$  H\_{0-1}: Macro economy indicators have strong influences towards a company's financial performance
- $\circ~$  H\_{1-1}: Macro economy indicators do not have strong influences towards a company's financial performance
- $\circ$  H<sub>0-2</sub>: Strategy effectiveness in customers' point of view has a strong influence towards a company's financial performance
- H<sub>1-2</sub>: Strategy effectiveness in customers' point of view does not have a strong influence towards a company's financial performance



#### Figure 4: Basic Research Model

## CHAPTER 3 RESEARCH METHODOLOGY

#### III. 1. RESEARCH PROCESS

Research begins with problems. Chapter 1 introduces the problems which arise from the relationship of macro economy, strategy, and ultimately a company's financial performance. Purposes, structures, and limitations are then produced to structure the way of thinking to establish expectation of the results. Chapter 2 elaborate the theories intertwined within the study and also mention previous studies that are selected as benchmarks. Hypotheses and basic research model finally are formulated to elevate the structuring of the research. As for the next step in chapter 3, the study will explain primarily on data collection and the overall conduct of the research. Chapter 4 discuss the data processing and analyses to obtain a result. Finally, chapter 5 is where everything that has being done is summarized into an insightful conclusion. The closure of the research will be the presentation of the report.

#### III. 2. PURPOSE OF RESEARCH

Predictive research is the purpose which embraced in the study. Predictive research is mostly arranged to examine the relationship, especially the influences, between variables of interest (Anantadjaya & Nawangwulan, 2018). This research focuses on proofing a substantial prediction among variables; when either macro economy gets stronger or strategy effectiveness increase, it is likely that a company's financial performance also increases. Noting the degrees of relationship, how significantly influencing one another they are, is the main purpose of the research conducted.

#### III. 3. TYPE OF RESEARCH

Both causal research and correlational research are the two type of research that conducted in this research. Correlation research uses to figure out the degree of influences among variables using primarily The Statistical Package for the Social Sciences (SPSS) software. Causal research is simply translating the statistic into the yes or no answer; whether or not the variables are actually affecting the other.

#### III. 4. DATA COLLECTION

#### III. 4. 1. PRIMARY DATA

The strategy effectiveness data is targeted towards customers. In order to obtain such direct data, the research will be conducted using Google Form. As for the type of either qualitative or quantitative, the research will be done with quantitative research. Within the Google Form, the respondents' answers will be categorized by numbers ranging from 1 up to 5, determining the level of agree and disagree.

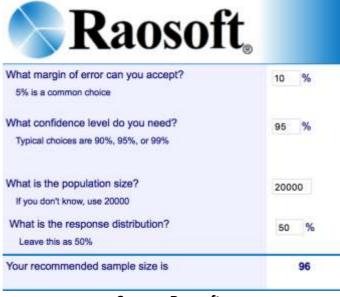
#### III. 4. 2. SECONDARY DATA

Macro economy indicators – all the GDP, interest rate, and CPI – are all using secondary data. Those economic-based data are available online in trustworthy sources like Bank Indonesia website. Financial data of publicly-listed companies are also

obtained using internet wherever the targeted companies' annual reports are available. All the secondary data is categorized as quantitative research because it all calculated by numbers.

#### III. 5. POPULATION AND SAMPLE III. 5. 1. SAMPLE SIZE

Figure 5: Sample Size Calculator



Source: Raosoft

The picture above shows the sample size recommended to be acquired for the research. 96 data sample is the recommended size for this research. Raosoft sample size calculator is one of the sample calculators available freely in the Internet.

#### III. 5. 2. ECONOMY DATA

The population are Indonesia economic data of GDP, Interest Rate (BI Rate), and Inflation (CPI) because the purpose of the study is to compare Indonesia and Germany. Data are obtained through Bank Indonesia (BI) and Badan Pusat Statistik (BPS) website as both of them are trustworthy information sources for getting Indonesian economic data. Economy data population calculation is 13 years x 12 month (based on data available in BI and BPS) = 156 data.

SAMPLING METHOD	DATA	TOTAL
Clustering	Indonesia economic data	156
Stratified	Year 2013 – 2017 per 2 weeks (using extrapolation)	120

Table	2:	Economy	y Data	Sampling
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#### **III. 5. 3. FINANCIAL PERFORMANCE DATA**

The population are sales and costs in annual reports of listed companies in Indonesia Stock Exchange (IDX). Currently, the companies listed in IDX are 573 (per 29 April 2019). Data are obtained in official website of the companies. The reason to choose companies listed in IDX is simply because the availability of the financial data.

SAMPLING METHOD	DATA	TOTAL
Clustering	IDX companies list	573
Clustering	Consumer Goods Industry	45
Stratified	Stock Index Main Board*	27
Stratified	Year 2013 – 2017 per 2 weeks	120

**Table 3: Performance Data Sampling** 

\*Main Board is a list in IDX of companies which categorized as having a large size and a good track record

#### III. 5. 4. STRATEGY DATA

Unlike the other data, strategy data is primary thus it will be obtained through questionnaire distribution. The population is everyone in Indonesia who is familiar with the companies or have used the products and have opinions regarding innovation and diversification strategy. The reason is simply because logically the people who act as respondents should have basic knowledge about the products of companies discussed. Indonesia population as per 29 April 2018 is 270.054.853.

#### Table 4: Strategy Data Sample

SAMPLING METHOD	DATA	TOTAL
Clustering	Indonesia population	270.054.853
Stratified	Have experienced all products (from listed companies)	-
Stratified	Aged between 17 – 50	-

#### **III. 6. VALIDITY AND RELIABILITY**

#### III. 6. 1. VALIDITY

Validity testing is a tool to quantify data to determine whether the relationship that the research intended to present can be reflected from the data collected. Simply to put, it answers whether or not the data collected can be used. A valid data is one where the relationship to be quantified is significant. Measurement of validity can be used by KMO test or communalities in SPSS software (Anantadjaya & Nawangwulan, 2018). Validity level below 0.5 or 50% in considered low and above 0.5 or 50% is considered good enough (Marnburg & Luo, 2014).

The steps for validity test are as follows:

1. Hover the cursor over "File" and pick "Dimension Reduction" then "Factors".

- 2. In the pop-up box, move all the variables namely GDP, Inflation, CCI, Profit Margin, ROA, Equity Multiplier, Debt-to-Equity Ratio and P/E Ratio from the left to the right side.
- 3. Click "Descriptive", mark all the options available and click "Continue".
- 4. Click "Extraction", check "Factors to Extract" and change the value to 2.
- 5. Click "Ok"
- 6. On the output screen, scroll down to the section titled "Component Transformation Matrix" (Sarwono, 2012)

Kaiser-Meyer-Olkin	,664	
Adequacy.		
Bartlett's Test of	Approx. Chi-Square	890,480
Sphericity	df	6
	Sig.	,000
	0 0000	

### Table 5: KMO and Bartlett's Test Example

Source: SPSS

#### III. 6. 2. RELIABILITY

Reliability is the extent to which measurements and outcomes using a research instrument are consistent and generate low level of errors (Anantadjaya & Nawangwulan, 2018). The Cronbach alpha in SPSS is one of the approaches to measure data reliability level. Reliability is differed from validity in terms of error level instead of significant relationship level. Reliability level below 0.5 or 50% in considered low and above 0.5 or 50% is considered good enough (Marnburg & Luo, 2014).

The steps for reliability test are as follows:

- 1. On the menu bar, highlight "Analyze", scroll down to "scale" and click "Reliability Analysis".
- 2. On the new pop-up, make sure that it is set for model "Alpha" and move all variables from the left box to the right.
  - 1. Click on the "Statistic" box and check "Item", "Scale", "Scale if item deleted", and click continue.
- 2. Click "OK" and the results will be displayed in the output window.
- 3. Scroll down to the section with the header "Reliability Statistics". The reliability value is the under "Cronbach's Alpha" items. Value greater than 0.5 is considered as reliable (Sarwono, 2012).

	Cronbach's	
	Alpha Based	
	on	
Cronbach's	Standardized	
Alpha	Items	N of Items
,785	,761	4

Table 6: Reliability Statistics

Source: SPSS

### IV. DATA ANALYSIS

PRE-TEST DESCRIPTIVE ANALYSIS

IV. 1.

Table 7: Descriptive Statistics									
	N	Mean		Std. Deviation	Variance	Skew	ness	К	urtosis
	Stat	Stat	Std. Error	Stat	Stat	Stat	Std. Error	Stat	Std. Error
Net Sales	72	1,00E13	2,233E12	1,895E13	3,590E26	2,639	,283	6,145	,559
COGS	72	6,75E12	1,667E12	1,414E13	2,001E26	3,083	,283	8,772	,559
Gross Profit	72	3,25E12	6,660E11	5,651E12	3,193E25	2,196	,283	3,360	,559
INFL	60	,434500	,0796661	,6170911	,381	2,313	,309	8,202	,608
СЫ	60	125,981333	1,2944835	10,0270261	100,541	,526	,309	-,386	,608
GDP	20	2,75E11	1,537E10	6,874E10	4,726E21	-2,430	,512	8,419	,992
Valid N (listwise)	20								

#### Source: SPSS

According to the theory, pre-test can be done with minimum 30 data. The N or number of data are different which indicates that some data missing is missing (GDP data especially). The mean basically tells explicitly the average of each sub-variable. The numbers are in code E because the data has pretty long 0s (stated in either million, billion, or trillion rupiah). Standard deviation shows the deviation of the data from average, also stated in E because the variety of the data are pretty significant. Skewness and Kurtosis shows some data are above +2 but not below -2 means the data are quite unequally distributed or not normal (George & Mallery, 2010), either the data are tend to be always positive (skewness) or tend to be too high (kurtosis).

#### IV. 2. PRE-TEST RELIABILITY ANALYSIS

	Table 8: Reliability Statistics			
		Cronbach's		
		Alpha Based on		
	Cronbach's	Standardized		
	Alpha	Items	N of Items	
	,699	,524	6	

#### Table 8: Reliability Statistics

Source: SPSS

According to the table above, the reliability of the data set is 69.9% indicating the reliability level of the data set is 69.9% reliable. It is above 50% (considered sufficient) and the researcher is satisfied with the number.

#### IV. 3. PRE-TEST VALIDITY ANALYSIS

	Initial	Extraction		
Net Sales	1,000	,999		
COGS	1,000	,998		
Gross Profit	1,000	<i>,</i> 998		
INFL	1,000	,977		
СЫ	1,000	,814		
GDP	1,000	<i>,</i> 852		
Source: SDSS				

#### **Table 9: Communalities**

Validity can be explained by KMO test, but sometimes KMO test can not be produced by a certain data set due to for example the correlation matrix is nonpositive definite or NPD (International Business Machines, 2016). Unfortunately, the occurrence happened in this research. Therefore, validity test is extracted from Communalities Test. The extraction numbers show how much power the data to explain its own variable. Thus, it can be seen the numbers are showing significant positive number.

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Source: SPSS

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