INFLUENCE INTELLECTUAL CAPITAL ABOUT COMPANY VALUE IN MANUFACTURING COMPANIES IN BASIC AND CHEMICAL INDUSTRY SECTORS LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD OF 2019 – 2021

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Abstract
This research was conducted at Manufacturing companies in the Basic Industry and Chemical Sector which are listed on the Indonesia Stock Exchange (IDX) for the 2019-2021 period. This study aims to determine the effect of Intellectual Capital on Firm Value. The population of the research conducted by the researcher was 78 Manufacturing Companies in the Basic Industry and Chemical Sector with a sample of 12 companies with a period of 3 years with a total of 36 companies. Analysis of the data in this study used the classical assumption test and Simple Linear Regression Analysis as an analysis tool that was processed with IBM SPSS 23 Software. The results of the analysis proved that the Coefficient of Determination test (R²) obtained a result of 0.316 or 31.6%, this indicates that the variable (VAIC™) on the dependent variable Firm Value of 31.6%, while the remaining 69.4% is influenced by other variables not included in this study. From the results of the Simple Linear Test, the regression equation is obtained, namely: Y = (-530.964) + 259.169X. The results of the partial T-test study variable value added intellectual coefficient (VAIC™) (X₁) tcount 3.959 > ttable (1.691), and a sig value of 0.000 < 0.05, indicating that VAIC™ has a significant effect on firm value (Y). Significant Manufacturing Companies in the Basic Industry and Chemical Sector Listed on the Indonesia Stock Exchange for the 2019-2021 period.

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1. INTRODUCTION

Background problem

Economic growth in the current era of globalization has developed very rapidly where this is also marked by the development of science and information technology which is increasingly advanced and aims to facilitate human activities. This is based on labor into a broad knowledge-based business concept in developing its business so that it is able to compete in an increasingly tight business market.

With increasingly intense competition in the business world, it has demanded company leaders to change their business patterns which only focus on physical resources (physical capital) into a knowledge-based business pattern (knowledge based business).

System implementation knowledge based business has an impact on financial reporting. Financial reporting usually focuses on financial performance but this is felt to be of little use to the overall performance appraisal of the company, there is a lot of information that needs to be presented in the company's financial statements which will provide added value to the company. As explained in the results of Herdyanto's research (2013) that added value can be in the form of innovation, invention, knowledge, employee development, and good relationships with consumers, which are often referred to as knowledge capital or intellectual capital.

Intellectual Capital in Indonesia began to develop after the emergence of the Statement of Standards Accountancy the financial (PSAK) No. 19 (revised 2000) regarding intangible assets. According to PSAK No. 19, intangible assets are non-monetary assets that can be identified and do not have a physical form and is owned for use in producing or delivering goods or services, for rent to other parties, or for administrative purposes (Indonesian Institute of Accountants, 2007).

Intellectual capital can be used as one of the factors to determine the value of the company because intellectual capital is one of the company's resources that can generate added value for the company. Intellectual capital is believed to play an important role in increasing corporate value and financial performance. Companies that are able to utilize their intellectual capital efficiently, their market value will increase. A company has a good value if the company's performance is also good.

The value of a company can be reflected in the price paid by investors for their shares in the market. Chen et al. (2005) stated that there is a positive relationship between intellectual capital with company value. If intellectual capital increases, in the sense that it is managed properly, then this can improve the perception market to firm value. According to theory stakeholder, all company activities lead to value creation /value creation.

One way to increase company value can be seen from how the company manages its intellectual capital owned by the company efficiently. Intellectual capital believed to play an important role in increasing company value (Hidayat and Hari, 2016). The same thing according to Mustika (2018) intellectual capital can create added value/value added for the company. Sayyidah and Saifi (2017) state the managing company intellectual capital A good company is a company that is able to develop capabilities and motivate employees to increase innovation. This is because the company's innovation can increase productivity, systems and structures that can support the company in maintaining or even increasing company value and company competitiveness. It was concluded that management Intellectual Capital a good will increase the value of the company and vice versa if the management Intellectual Capital If it is not going well, it will affect the company and will result in poor company performance.

According to Hermaningsih (2013) company value can be assessed by Price Book Value (PBV). Price book value is the ratio between the stock price and the book value per share owned by the company. A high PBV will increase market confidence in the company's prospects and indicate shareholder prosperity. PBV can also be interpreted as a ratio that shows whether the price of the stock being traded is overvalued or undervalued of the book value of the shares. PBV is a sufficient financial ratio representative used to see the value creation of the company. Therefore in this study the value of the company is measured by using the ratio Price Book Value (PBV).

Increasing company value is the hope of every company owner, because a high company value indicates that the company is able to provide welfare for investors. Company management and investors have an important role in determining the amount of profit and prosperity that will be obtained by the company, by focusing on the
stock price or market value of the company, investors can find out the development of the company's value. The stock prices for manufacturing companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange for the 2019-2021 period can be seen in the table, which is as follows.

**Table 1:**

<table>
<thead>
<tr>
<th>NO</th>
<th>CODE</th>
<th>YEAR</th>
<th>CLOSING SHARE PRICE (Rp)</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>ALDO</td>
<td>2019</td>
<td>380</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2020</td>
<td>440</td>
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<tr>
<td></td>
<td></td>
<td>2021</td>
<td>1130</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2019</td>
<td>440</td>
</tr>
<tr>
<td>2</td>
<td>ARNA</td>
<td>2020</td>
<td>640</td>
</tr>
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<td></td>
<td></td>
<td>2021</td>
<td>805</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2019</td>
<td>70</td>
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<tr>
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<td>CAKK</td>
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<tr>
<td></td>
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<td>4</td>
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<td></td>
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<td>212</td>
</tr>
<tr>
<td>5</td>
<td>LIGHT</td>
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<td>155</td>
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<td>2021</td>
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<td></td>
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<td>590</td>
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<td>2019</td>
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<td>LIGHT</td>
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<td></td>
<td></td>
<td>2019</td>
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<td>2020</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>2021</td>
<td>248</td>
</tr>
</tbody>
</table>

Source: IDX data 2019-2021

Based on the table above, it can be seen that there are several stock prices for manufacturing companies in the basic industrial and chemical sectors for the 2019-2021 period that have experienced instability or fluctuation. Unstable stock prices can be concluded that the company's performance is not good, so this makes the company unable to maximize the value of the company to produce a return which can prosper the investors, such as the share price at PT. Wijaya Karya Beton (Persero) Tbk (WTON) where in the last three years, namely from 2019 to 2021, the share price has decreased, in 2020 the share price reached IDR 404 per share and
decreased in 2021 to IDR 248 per shares, this is due to a decrease in net profit which occurs due to reduced operating income of a subsidiary of PT. Wijaya Karya (Persero) Tbk (WIKA), therefore the decrease in net profit has an impact on the decrease in the value of the company’s share price. Stock prices that are unstable or fluctuate in the long term can be concluded that the company’s performance is less stable and indicates that the welfare of investors is not good.

The reason for the researchers taking this research was because of several phenomena of the rise and fall of stock prices caused by the Covid-19 pandemic so the researchers were interested in conducting this research and also wanted to retest from previous research that researched by Ajeng Ayu Utari, Wawan Sukmana, and Laras Pratiwi (2021), and using the same variable Intellectual Capital as measured using the VAIC™ method and Company Value as measured by Price to Book Value (PBV) as the dependent variable. However, the researchers tried different objects and years, because the journals used were different researched previously using the Telecommunications Sub Sector Manufacturing company period 2016-2020 while researchers used Manufacturing companies in the Basic Industry and Chemical Sector for the 2019-2021 period, and to see if Intellectual Capital effect on Firm Value, because in the journal previously with the results of the study showing that the independent variable has an effect on the dependent variable with an adjusted value R-square by 65%.

The study in this research uses manufacturing companies in the basic and chemical industry sectors which are listed on the Indonesia Stock Exchange because this sector is one of the largest contributors to economic growth in Indonesia, basic industrial and chemical stocks are also in great demand by investors. However, in 2019-2021 there were several stock prices for manufacturing companies in the basic and chemical industry sector that experienced fluctuations. Conditions that indicate fluctuations in stock prices are interesting to find out how this affects company value in terms of intellectual capital. And the selection of the basic and chemical industry sector because this sector represents the basic elements used in everyday life from basic and chemical industrial production.

Based on the background above, the researcher is interested in conducting research entitled "INFLUENCE INTELLECTUAL CAPITAL ON COMPANY VALUE IN MANUFACTURING COMPANIES IN THE BASIC AND CHEMICAL INDUSTRY SECTORS LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2019-2021 PERIOD.

Problem Formulation
From the background above, the formulation of the problem in this study is as follows:
Is Intellectual Capital effect on company value in manufacturing companies in the basic industrial and chemical sectors listed on the Indonesia Stock Exchange for the 2019-2021 period?

Research purposes
From the background above, the objectives of this study are as follows:
To find out if Intellectual Capital has an effect on company value in manufacturing companies in the basic industrial and chemical sectors listed on the Indonesia Stock Exchange for the 2019-2021 period.

2. LITERATURE REVIEW
Financial management
Financial management according to Sundjaja and Barlian (2003) explains that financial management is "Management related to duties as a financial manager in a business company. Finance managers actively manage the financial affairs of various types of businesses, whether financial or non-financial, private or public, large or small, profit or non-profit. They carry out various activities, such as budgeting, financial planning, cash management, credit administration, investment analysis and efforts to obtain funds. While the notion of financial management according to Horne and Wochowiez (2012) defines "Financial management is all activities related to the acquisition, funding and management of assets with several objectives.

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Financial management is the management of financial functions. These financial functions include how obtain funds (raising of fund) and how to use the funds (allocation of fund). The financial manager has an interest in determining the appropriate amount of assets from investing in various assets and selecting sources of funds to finance these assets.

According to Sutrisno, financial management is all company activities with efforts to obtain company funds at a low cost and efforts to use and allocate these funds efficiently.

Financial Management is an activity of planning, budgeting, checking, managing, controlling, seeking and depositing funds owned by an organization or company.

Financial planning, namely making income plans and production as well as other activities for a certain period. Financial Budgeting is a follow-up to financial planning by detailing expenses and income. Financial Audit, namely conducting an internal audit of the company's existing finances to prevent irregularities. Financial Management, namely using company funds to maximize existing funds in various ways. Financial Control, namely evaluating and improving the finances and financial systems of the company. Financial search, namely finding and exploiting existing sources of funds for the company's operational activities. Financial Depository, namely collecting company funds and storing these funds safely.

Financial statements

Financial statements are written records that convey the activities and financial condition of a business or entity and consist of four main components. Financial reports are simply information regarding financial activities in a company that can be used to view and assess a company's condition and assess company performance in a certain period (Mutiah, 2019).

According to Kasmir (2019) financial reports are reports that show the company's financial condition at this time or in a certain period. The current or current condition of the company is the company's financial condition on a certain date (for the balance sheet) and a certain period (for the income statement). The company's financial statements that are presented in full must consist of a profit/loss report, a statement of changes in equity, a statement of financial position (balance sheet), a cash flow statement, and notes to financial statements.

Financial reports have a purpose, one of which is that financial reports can describe the results of accountability management in managing the funds entrusted to the company. The financial statements presented by a company must be able to be held accountable; the truth is, because of that very necessary for interested parties in evaluating the development of company performance as decision-making by both internal and external parties (Amin, 2020).

Annual Report is an important source of information about the performance and prospects of the company for shareholders and the public as one of the basic considerations and making investment decisions (Bapepam LK Decision, 2012). In addition there are reporting opportunities for intellectual capital with deep narrative format annual reports (Beattie and Thomson, 2007). Based on the decision of the Chairman of Bapepam LK Number Kep-431/BL/2012, the annual report must contain an overview of important financial data, reports of the board of commissioners, reports of directors, company profiles, management analysis and discussion, corporate governance, corporate social responsibility, financial reports audited annual reports, statements of responsibility of the board of commissioners and directors for the correctness of the contents of the annual report.

Intellectual Capital

a. Understanding Intellectual Capital

Intellectual Capital is the sum of everything that exists at the company to compete in the market, covers intellectual material – knowledge, information, experience and intellectual property which can be used to create welfare (Stewart, 1997) in Ulum (2017). Intellectual Capital calculated based on value added which was created by physical capital and capital employed, human capital, and structural capital. This third combination is called VAIC™ which was developed by Pulic (1998).
Intellectual capital considered as the sum of what is produced by the three main elements of the organization (human capital, structural capital, customer capital) relating to knowledge and technology that can provide added value to companies in the form of organizational competitive advantage (Sawarjuwono and Kadir, 2003). Intellectual Capital includes all employee knowledge and the company's ability to create added value and competitive advantage. Intellectual capital is an intangible asset which if used effectively can increase competitive advantage for the company.

Nuryaman (2015) defines intellectual capital as the company's intangible assets in the form of knowledge, information, experience possessed by humans, the company's organizational resources. From several senses it can be concluded that intellectual capital is the sum of all the information, knowledge, technology and resources resulting from the three main elements (capital employed, human capital and structural capital) that can provide value to the company and provide competitive advantage.

According to Brooking (1996) in Ulum (2017) Intellectual Capital is a combination of intangible assets consisting of markets, intellectual property, human resources, and infrastructure that can carry out its functions inside a job. Knowledge categories can be divided into three categories, namely those related to employees (human capital), customer-related knowledge (customer capital), and knowledge related to the company (structural capital). These three categories can form an intellectual capital for the company.

International Federation of Accountants IFAC (in Chayati and Kurniasih, 2014) has classified intellectual capital into three categories, viz organizational capital, relational capital, and human capital. Leif Edvinsson (in Fahrizal, 2015) states that the value of a company's intellectual capital is the result of the sum of the components human capital and structural capital. Brinker (Fahrizal, 2015) then added the third component by entering customer capital as a component of intellectual capital.

Intellectual Capital have been identified as a set of intangibles (resources, capabilities, and competencies) that drive organizational performance and value creation (Bontis, 1998). Intellectual Capital identified as a knowledge resource in the form of employees, customers, processes or technology that companies use in the process of creating value for the company (Ulam, 2009). Company added value can be created through physical and financial resources. Whereas Intellectual Capital is an intangible asset which is not easy to measure. Based on this, a solution is needed to measure and report intellectual capital company and how intellectual capital provides added value to the company. Hence the concept arose Value Added Intellectual Coefficient (VAIC™) to measure value intellectual capital.

Value Added Intellectual Coefficient (VAIC™) is a method used to measure the value of intellectual capital owned by a company. According to Public (1998) this method is designed to present information about the value creation efficiency of tangible assets and intangible assets. The measurement of the VAIC™ method starts from the company's ability to create added value (value added / AND). Value added is the most objective indicator to measure the level of success of the company and to determine the company's ability to create added value for the company.

b. Value Added Intellectual Coefficient (VAIC™)

VAIC™ is a method used to measure the efficiency of added value obtained from a company's intellectual ability. The main components of the company's VAIC™ are: physical capital, human capital, and structural capital. If there is a higher value on the VAIC™, it indicates a greater efficiency in the use of company capital (Pulic, 2000).

The VAIC™ method, developed by Pulic (1998), is designed to provide information about value creation efficiency from tangible assets (tangible asset) and intangible assets (intangible asset) owned by the company. This model starts with the company's ability to create value added (AND). Value added is the underlying component of Pulic's model. Value Added shows the company's ability to create value (Value Creation) so that it is considered to be the most objective indicator for assessing business success and demonstrating the company's ability to create value (value creation).
Pulič (1998) in Ulum (2017) proposes the Coefficient of Intellectual Added Value /Value Added Intellectual Coefficient (VAIC™) to provide information on the value creation efficiency of tangible and intangible assets within companies. VAIC™ is used because it is considered a suitable indicator for measuring IC. Some of the main reasons that support the use of VAIC™ include:

1) VIAC™ provides a standardized and consistent measure of the standard financial figures generally available from a company's financial statements (Pulič and Bornemann, 1999), thus enabling more effectively conducting international comparative analyzes using large sample sizes across a wide range of industry sectors.

2) All data used in VAIC™ calculations is based on audited information, so calculations can be considered objective and verifiable (Pulič, 1998).

VAIC™ is an analytical procedure designed to enable management, shareholders and other relevant stakeholders to effectively monitor and evaluate the efficiency of added value or Value Added (VA) with the company's total resources and each component of the main resources.

VAIC™ (Value Added Intellectual Capital) is an instrument to measure performance of an intellectual capital company. The greater the VAIC™ value obtained, the more efficient the use of the company's capital that will create value added companies that will increase the value of the company in the future (Sudbaya and Restuti, 2014).

Pulič (2000) in Ulum (2017) states that intellectual ability shows how these two resources have been efficiently utilized by the company. The bigger the value intellectual capital the more efficient use of the company's capital, thereby creating value added for the company. Therefore, it is known that the VAIC™ method (Value Added Intellectual Coefficient) which is used to measure the efficiency of the added value generated by the company's intellectual ability. Component intellectual capital by experts consists of several components. This study uses three main components intellectual capital developed by Pulic, namely VACA (Value Added Capital Employed), FOAM (Value Added Human Capital) THINGS (Structural Capital Value Added). The following describes some of the components intellectual capital.

c. Component Intellectual Capital

The VAIC™ model begins by calculating a company's ability to create Value Added (AND). Value added is the most objective indicator for assessing business success and demonstrates the company's ability to create value. Pulič (1998) states that VAIC™ measurement uses three main components, namely:

1) Value Added Capital Employed (COW)

VACA is an indicator for value added which is created by a unit of physical capital. Pulic assumes that if one unit of capital employed produces are turn larger than other companies, then the company is better at utilizing capital employed-his. Thus, utilization capital employed the better part of an intellectual capital company.

2) Value Added Human Capital (FOAM)

Value Added Human Capital (VAHU) indicates how much value added can be produced with funds issued for labor. Relationship between value added and human capital indicates the ability of human capital to create value within the company. Human Capital is a major part of intellectual capital. Human Capital is a source of very useful knowledge, skills, and competencies in an organization or company.

3) Structural Capital Value Added (THINGS)

Structural capital resulting from the difference between value added with human capital. If contributions from human capital in value creation is smaller, then the contribution of structural capital is bigger, and vice versa. value added structural capital shows how much value added can be produced with the funds issued after being reduced by the funds issued for labor.
d. **Measurement Intellectual Capital**

Sawarjuwono (2003) states that the measurement method Intellectual Capital grouped into two namely: non measurement monetary and measurements monetary. One measurement method Intellectual Capital with a non-monetary assessment, namely the Balanced Scorecard by Kaplan and Norton, while the measurement method Intellectual Capital with a monetary valuation, one of which is the Pulic model known as VAIC™.

According to Sunarsih (2016)intellectual capital is a resource owned by the company where intellectual capital focus on knowledge that can give an advantage to the company. Intellectual capital in this study was measured by Value Added Intellectual Coefficient (VAIC™) developed by Pulic (1998). The VAIC™ formulation and calculation steps are as follows:

1) Count Value Added (AND)
   \[ VA = OP + CE + D \]

2) Count Value Added Capital Employed (COW)
   \[ COW = \frac{AND}{THINGS} \]

3) Count Value Added Human Capital (FOAM)
   \[ FOAM = \frac{AND}{HC} \]

4) Count Structural Capital Value Added (THINGS)
   \[ SC = VA - HC \]
   \[ STUFF = \frac{SC}{AND} \]

5) Count Value Added Intellectual Coefficient (VAIC™)
   VAIC™ is the sum of VACA, VAHU and STVA. VAIC™ can also be considered as BPI (Business Performance Indicator). VAIC™ is calculated by the following formula:
   \[ VAIC™ = VACA + VAHU + STVA \]

**The value of the company**

a. **Definition of Corporate Value**

Mardiyanto in Rahayu (2018) explains that company value is the present value of a series of cash inflows that the company will generate in the future. Margaretha (2005) explains that the value of a company that has gone public is reflected in the market price of the company's stock. While the value of the company has not gone public the value is realized if the company is to be sold (total assets and prospects of the company, business risks, business environment, etc.).

The value of a company is the price that investors and other business people are ready to pay if a company sells its shares. The value of a company can be reflected in the price of its shares in the stock market. The value of a company can be measured using the market value ratio (market value ratio) which relates to the company's stock price to earnings, cash flow, and book value per share (Brigham and Houston, 2006).

The high share price will increase company value and investor prosperity will be higher. The low stock price also affects the value of the company and also affects office investors towards companies that are not good (Agustina 2017). This is because the stock price is an illustration of the actual value of the company's assets which can be influenced by investment opportunities. Meidiawati and Mildawati (2016) state that the existence of investment opportunities will provide a positive signal about the company's growth in the future which can increase stock prices.

From the several definitions above, it can be concluded that firm value is a certain condition that has been achieved by a company which is reflected in the company's stock market price.

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b. Corporate Value Measurement

The measurement of company value according to (Brigham and Daves, 2014) in the company valuation ratio is as follows:

1) **Price Earning Ratio (PER)**

   Price Earning Ratio (PER) shows how much money investors are willing to spend to pay for each reported profit. This ratio is used to measure the ratio between the company's stock price and the profits earned by shareholders. Its use is to see how the market appreciates the company's performance as reflected by Earning Per Share. Price Earning Ratio shows the relationship between the common stock market and earning per share. For investors the higher price earning ratio the expected profit growth will also increase.

   According to Brigham and Houston (2001). PER shows a comparison between closing price with earnings per share (earning per share). PER can be calculated by the formula:
   
   \[
   \text{PER} = \frac{\text{Stock Market Price}}{\text{Earnings Per Share}}
   \]

2) **Tobin's Q Ratio (Q Tobin)**

   Tobin's Q is a statistical picture that functions as a proxy for the value of the company from the investor's point of view. Tobin's Q is the ratio of the market value assets company as measured by the market value of the number of shares outstanding and owed again replacement cost of company assets. To determine the value of a certain company asset, such as the value of certain inventories, you can do it by doing a comparison with one of the many circulating suppliers in the market. However, in many cases the replacement value of assets can prove to be much more elusive. For example in highly specialized and probable assets no comparable alternatives are available. It also appears in a variety of business contexts, from complex industrial machines to intangible assets such as goodwill.

   Tobin's Q model defines firm value as a combination of tangible assets and intangible assets. MarkTobin'S Q a low company (between 0 and 1) indicates that the cost of replacing the company's assets is greater than the market value of the company. This matter indicate that the market undervalues the company. Whereas if them Tobin's Q a high company (more than 1), then the value of the company is greater than the value of listed company assets.

   Tobin's Q is the market value of the company's assets divided by their replacement cost. Tobin's Q can be calculated by the formula:
   
   \[
   Q_{\text{Tobin}} = \frac{\text{Market Value of Company Assets}}{\text{Cost of Replacement of Company Assets}}
   \]

3) **Price Book Value (PBV)**

   Price Book Value (PBV) describes how much the market appreciates the book value of a company's shares. The higher the PBV ratio, the market believes in the company’s prospects. PBV also shows how far a company is able to create company value relative to the amount of capital invested. PBV can also mean the ratio that shows whether the price of the stock being traded is overvalued(on)undervalued(below) the company's book value.

   PBV is the result of a comparison between the stock price and the book value. Book value per share can be calculated by comparing the total equity common stock with the number of outstanding shares. By dividing the price per share by the book value, the ratio of market value or book value is obtained as follows:

   \[
   \text{PBV} = \frac{\text{Market Price Per Share}}{\text{Book Value Per Share}}
   \]

   The market value ratio used in this research to measure the value of a company is to use the ratio Price to Book Value (PBV).

   Brigham and Houston (2011) stated that price to book value (PBV) is a financial ratio that compares the share price with the book value per share, if the PBV value is higher, the greater the level of prosperity of the shareholders, so that the company is said to have achieved one of its goals.
With this ratio, investors can find out several multiples of the market price to the book value per share that they invest in. The PBV ratio can measure the value provided by financial markets, management, and the company’s organization as a company that continues to grow (Brigham, 2001). The PBV ratio can show the size of the public’s assessment of the book price or company value reflected in the market Bursa or capital market. The greater the PBV value, the higher the investor’s appreciation of the company's value.

Some of the reasons investors use PBV in investment analysis are because according to Damodaran (2001) that the PBV ratio has several advantages as follows:

a) Book value has a relatively stable intuitive measure comparable to market prices. Investors who do not believe in the method of discounted cash flow can use price to book value as a comparison.

b) Book values provide a consistent accounting standard for all companies. PBV can be compared between the same companies as an indication of existen center and over valuation.

c) Company with earnings negative, which cannot be assessed using price earning ratio can be evaluated using price to book value (PBV).

Influence Intellectual Capital Against Company Value

According to Edvinsson and Malone (1997) in Ulum (2017) one of the advantages of intellectual capital is a tool to determine the value of the company. Companies that can afford intellectual capital efficiently, then the market value will increase (Sunarsih and Mendra, 2012), The bigger the VAIC™, the more efficient the use intellectual capital companies that can create added value for the company, so as to increase the market value of the company.

Based on Theory Stakeholder which shows the relationship between company management and stakeholder. According to Freeman and Reed (1983) in Ulum (2017) stake holder are groups or individuals who are identified as able to influence organizational goals or can be influenced by organizational goals. Groups included stakeholder according to Belkaoui (2003) in Ulum (2017) are shareholders, employees, customers, suppliers, creditors, government and society. The group said stakeholder if you have power or interest in the person concerned. Relationship between Intellectual Capital with Company Value can be explained in this theory, company management can take advantage of the company's intangible assets, namely intellectual capital in this case the resources owned by the company, both employees (human capital), physical assets (physical capital) as well structural capital. Utilization and good management of all the resources owned by the company will create value added for the company so that it can affect the value of the company.

And based on Resource Based Theory which discusses how companies can manage and utilize their data sources to achieve competitive advantage (Yuskar and Novita, 2014). This theory can explain the relationship Intellectual Capital with the value of the Company's Value, this theory discusses the resources owned by the company with how the company can manage and utilize the resources it has. Good management and utilization of the company's resources will create a competitive advantage so as to create value for the company.

With this it can be concluded that companies that have good intellectual resources will affect company performance which will ultimately improve the mark of the company.

Thinking Framework

According to Sugiyono (2019) The framework is a conceptual model of how theory relates to various factors that have been identified as important issues.

**Figure 1. Thinking Framework**

![Figure 1. Thinking Framework](image)
Hypothesis

According to Sugiyono (2019) the hypothesis is a temporary answer to the research problem formulation, where the research problem formulation has been stated in the form of a question sentence. The hypothesis in this study is as follows:

\[ H_1 : \text{Allegedly Intellectual Capital has an effect on company value in manufacturing companies in the basic industrial and chemical sectors listed on the Indonesia Stock Exchange for the 2019-2021 period.} \]

3. RESEARCH METHODS

Research design

Based on the type of data, this research is categorized as a quantitative study. Quantitative research is research to describe the state of the company which is carried out through analysis based on the quantitative data obtained. Quantitative data is data in the form of numbers or qualitative data that is calculated/scoring, Sugiyono (2019). The quantitative data used in this study are the financial statements of Manufacturing Companies in the Basic Industry and Chemical Sector which are listed on the Indonesia Stock Exchange for the 2019-2021 period and obtained data namely, Value Added Intellectual Coefficient (VAIC™) and Price to Book Value (PBV).

Population and sample

Population

According to Sugiyono (2019) Population is a generalized area consisting of objects or subjects that have certain qualities and characteristics set by researchers to study and then draw conclusions. The population in this study are all Manufacturing companies in the Basic Industry and Chemical Sector which are listed on the Indonesia Stock Exchange for the 2019-2021 period. The number of Manufacturing companies in the Basic Industry and Chemical Sector listed on the Indonesia Stock Exchange during the study period totaled 78 companies.

Sample

According to Sugiyono (2019) The sample is part of the number and characteristics possessed by the population, if the population is large and the researcher does not study everything in the population, for example due to limited funds, manpower and time, the researcher can use samples taken from that population.

The sample in this study is annual financial data. And the sampling technique in this study was carried out in a way purposive sampling namely sampling techniques using certain characteristics or considerations. The criteria are:

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manufacturing Company in the Basic Industry and Chemical Sector listed on the Indonesia Stock Exchange for the 2019-2021 period</td>
<td>78</td>
</tr>
<tr>
<td>2</td>
<td>Companies that don’t Publish Consecutive Financial Reports from 2019-2021</td>
<td>77</td>
</tr>
<tr>
<td>3</td>
<td>A Manufacturing Company in the Basic Industry and Chemical Sector which experienced consecutive negative equity and profits during the 2019-2021 period.</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>Enterprises that do not have Equipment and availability financial report data according to research</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>Financial reports that do not use Rupiah values for 2019-2021.</td>
<td>12</td>
</tr>
</tbody>
</table>

In accordance with predetermined criteria, 78 manufacturing companies in the basic and chemical industry sectors were listed on the Indonesia Stock Exchange in the 2019-2021 period and 12 manufacturing...
companies in the basic industry and chemical sector met the research sample criteria. The following list of company names is presented, taken as research samples:

Table 3: List of Research Samples

<table>
<thead>
<tr>
<th>NO</th>
<th>CODE</th>
<th>NOCOMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ALDO</td>
<td>AlkindoNaratamaTbk.</td>
</tr>
<tr>
<td>2</td>
<td>ARNA</td>
<td>ArwanaCitramuliaTbk.</td>
</tr>
<tr>
<td>3</td>
<td>CAKK</td>
<td>CahayaputraAsaKeramikTbk.</td>
</tr>
<tr>
<td>4</td>
<td>DPNS</td>
<td>Duta Pertiwi NusantaraTbk.</td>
</tr>
<tr>
<td>5</td>
<td>LIGHT</td>
<td>IndonesiaFibreboard IndustryTbk.</td>
</tr>
<tr>
<td>6</td>
<td>Henna</td>
<td>IndalAluminium IndustryTbk.</td>
</tr>
<tr>
<td>7</td>
<td>PEARL</td>
<td>IntanwijayainternasionalTbk.</td>
</tr>
<tr>
<td>8</td>
<td>KMTR</td>
<td>KiranaMegataraTbk.</td>
</tr>
<tr>
<td>9</td>
<td>LIGHT</td>
<td>PT MadusaniMumi Indah Tbk.</td>
</tr>
<tr>
<td>10</td>
<td>SMBR</td>
<td>Semen BaturajaTbk.</td>
</tr>
<tr>
<td>11</td>
<td>SMGR</td>
<td>Semen Indonesia (Persero) Tbk.</td>
</tr>
<tr>
<td>12</td>
<td>WTON</td>
<td>WijayaKaryaBetonTbk.</td>
</tr>
</tbody>
</table>

Source: IDX Data for 2019-2021

Operational Definition and Variable Measurement

According to Sugiyono (2019) Research variables are anything in any form determined by researchers to be studied so that information is obtained about it, then conclusions are drawn.

In accordance with the research title "Influence Intellectual Capital Regarding Company Value in Manufacturing Companies in the Basic Industry and Chemical Sector Listed on the Indonesia Stock Exchange for the 2019-2021 period. The author tests with two variables, namely as follows:

a. Independent variable (X)

According to Sugiyono (2019) Independent Variables are variables that influence or cause changes or the emergence of dependent or dependent variables. Then the independent variables in this study are Value Added Capital Coefficient (VAIC™)

b. Variable Depend (AND)

According to Sugiyono (2019) Dependent Variable or dependent variable is a variable that is affected or becomes a result due to the existence of independent or independent variables. In accordance with the problem to be studied which will be the dependent variable in this study is the Firm Value.

Data collection

According to Sugiyono (2019) data collection techniques are ways to obtain data and information that supports this research.

The data taken in this study is secondary data. According to Sugiyono (2019) secondary data is the source of research data obtained by researchers indirectly through intermediary media (obtained and recorded by other parties). Secondary data can be in the form of evidence, records, or historical reports that are neatly arranged and published, namely data obtained indirectly from the company which is used as the unit of analysis using the following techniques:

a. Literature study (Library Research)

Methods Literature study is related to theoretical studies and other references related to the understanding of the object under study. Writing obtains several sources of data derived from references such as books, previous research and other sources related to research.

b. Documentation

This method is carried out by collecting data regarding matters in the form of notes, book transcripts and also forms files stored on the website. The data used in this study were obtained from annual financial reports on

Data analysis

According to Sugiyono (2019) data analysis is an activity after all data from all respondents or other data sources has been collected. Activities in data analysis are grouping data based on variables from all respondents, presenting data for each variable researched, performing calculations to answer the problem formulation and performing calculations to test the hypotheses that have been proposed. Analysis of the data used in quantitative research is to see how the independent variables relate to the dependent variable using the SPSS program (Statistical Product and Service Solution). Which is one of the computer applications for analyzing statistical data, the analysis includes: Descriptive statistical test, classical assumption test, simple linear regression analysis, t test, and determination test.

4. RESULTS AND DISCUSSION

RESULTS

Statistic test Descriptive

According to Ghozali (2021) Descriptive Statistics provides an overview or description of data seen from the average value (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis and skewness. The descriptive test focuses on a systematic explanation of the facts obtained when the research is carried out.

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>X1</td>
</tr>
<tr>
<td>AND</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

Based on the table above, it can be seen that descriptive statistics show information about values minimum, maximum, mean and standard deviation each variable with valid data (N) is 36. The minimum value of variable X1 (VAIC™) 1.096 and a maximum value of 5.640 with an average value (mean) of 2.61913 and a standard deviation of 1.110625. Variable Y (Company Value) has a minimum value of 0.241 and a maximum of 2,139.530 with an average value of (mean) of 147.83217 and a standard deviation of 512.388117.

Classic assumption test

One of the requirements to fulfill the multiple regression equation is through the classical assumption test. The classical assumption test is used to determine whether the model used in the regression actually shows a significant and representative relationship. With this classic assumption test, it is expected that the results obtained can be held accountable and not biased. In this study there are several classic assumption tests used, which include the Normality Test, Multicollinearity Test, Heteroscedasticity Test and Autocorrelation Test.

Normality test

The normality test aims to test whether in the regression model, the confounding variable or residual have a normal distribution. As it is known that the t test and F test assume that the value residual follows a normal distribution. If this assumption is violated, the statistical test becomes invalid for small samples (Ghozali, 2021).

The basis for decision making in the normality test is that if the significance value is greater than 0.05 then the data is normally distributed. Conversely, if the significance value is less than 0.05, the data is not normally distributed.
One-Sample Kolmogorov-Smirnov Test

<table>
<thead>
<tr>
<th>Normal Parameters</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Extreme Differences</td>
<td>Absolute</td>
<td>Positive</td>
</tr>
<tr>
<td>Test Statistic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monte Carlo Mr. (2-tailed)</td>
<td>Say.</td>
<td></td>
</tr>
<tr>
<td>99% Confidence Interval</td>
<td>Lower Bound</td>
<td>Upper Bound</td>
</tr>
</tbody>
</table>

Unstandardized Residual

<table>
<thead>
<tr>
<th>N</th>
<th>36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Statistic</td>
<td>.215</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>Monte Carlo Mr. (2-tailed)</td>
<td>.063</td>
</tr>
<tr>
<td>99% Confidence Interval</td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Upper Bound</td>
<td>.069</td>
</tr>
</tbody>
</table>

It is known from the output above in the Kolmogorov-Smirnov column that it can be seen that the normality test uses the method Kolmogorov-Smirnov significant at 0.069 > 0.05, it can be concluded that the regression method in this study has met the assumption of normality, because the significance value is greater than 0.05.

**Multicollinearity Test**

The multicollinearity test aims to test whether the regression model found a correlation between the independent (independent) variables. A good regression model should not have a correlation between independent variables. If the independent variables are correlated, then these variables are not orthogonal. Orthogonal variables are independent variables whose correlation values among independent variables are equal to zero (Ghozali, 2021).

To detect the presence or absence of multicollinearity in a model, it can be seen from several things, namely. If value Variance Inflation Factor (VIF) no more than 10 and value Tolerance not less than 0.1, the model can be said to be free from multicollinearity.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Err</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-530.964</td>
<td>185.822</td>
<td></td>
</tr>
<tr>
<td>X1</td>
<td>259.169</td>
<td>65.457</td>
<td>.562</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Y

Based on the results of the table above, the VIF value of the independent variable has a value that is smaller than 10 and values Tolerance which is greater than 0.10. These results indicate the absence of multicollinearity symptoms in each regression model.

**Heteroscedasticity Test**

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. If the variance from the residual of one observation to another observation remains, then it is called Homoscedasticity and if it is different it is called Heteroscedasticity. A good regression model is one that has homoscedasticity or does not have heteroscedasticity. (Ghozali, 2021). In this study to detect whether there is heteroscedasticity is done by graphical scatterplot namely by looking at the graph plot between the predicted value of the dependent variable, namely ZPRED, with the residual SRESID. Detect whether there is a certain pattern on the chart scatterplot between SRESID and ZPRED where the Y axis is the predicted variable, and the X axis is the residual. To prove whether there is a heteroscedasticity disorder, it can be seen from the scatter diagram pattern (scatter-plot).
Based on the output above, it can be seen that the dots spread and do not form a certain pattern, so it can be concluded that there is no heteroscedasticity problem.

**Autocorrelation Test**

The autocorrelation test aims to test whether in the linear regression model there is a correlation between the confounding errors in period t and the confounding errors in the (previous) t-1 period (Ghozali, 2021).

Measurement of autocorrelation in this study was tested using testRun Test. To see whether there is autocorrelation or not in the regression model of this study.

<table>
<thead>
<tr>
<th>Runs Test</th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Value&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-41.69980</td>
</tr>
<tr>
<td>Cases &lt; Test Value</td>
<td>18</td>
</tr>
<tr>
<td>Cases &gt;= Test Value</td>
<td>18</td>
</tr>
<tr>
<td>Total Cases</td>
<td>36</td>
</tr>
<tr>
<td>Number of Runs</td>
<td>18</td>
</tr>
<tr>
<td>WITH</td>
<td>-1.169</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.866</td>
</tr>
</tbody>
</table>

Based on output above, it is known that the Asympvalue.Say. (2-tailed) of 0.866 > 0.05. So it can be concluded that there are no symptoms or autocorrelation problems.

**Simple Linear Regression Analysis**

<table>
<thead>
<tr>
<th>Coefficients&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
</tr>
<tr>
<td>X1</td>
</tr>
</tbody>
</table>

Based on the table, it produces the equation \( Y = -530.964 + 259.169X \). That is, if there is an additional intellectual capital by 1 it will increase the value of the company by 259.169 in manufacturing companies in the basic and chemical industry sectors.

**Partial Test (t)**

The t test shows how far the influence of one independent variable individually explains the variation in the dependent variable (Ghozali, 2021). Individual Parameter Significance Test (t test) was carried out to compare at the level of significance value with \( a = 0.05 \) or 5%.

*Journal homepage: [http://ingreat.id](http://ingreat.id)*
Variable testing Value Added Intellectual Coefficient (VAIC™)

Based on output above is obtained $t_{\text{count}}$ of 3.959. And $t_{\text{table}}$ with degrees of freedom (df) $n-k-1$ or $36-1-1 = 34$ with a test of 0.05 then obtained $t_{\text{table}}$ of 1.691.

VAIC has a $t$ Value $t_{\text{count}}$ 3.959 > $t_{\text{table}}$ (1.691), and a sig value of 0.000 < 0.05. These results indicate that VAIC has a significant effect on firm value. Therefore $H_0$ is rejected and $H_a$ is accepted which means $X_1$ (VAIC) partially has a significant effect on Firm Value.

### Determination Test (R)

The coefficient of determination ($R^2$) essentially measures how far the model's ability to explain the variation in the dependent variable. (Ghozali, 2021). The value of the coefficient of determination is between zero and one. A small value ($R^2$) means that the ability of the independent variable to explain the variation in the dependent variable is very limited. A value that is close to one means that the independent variable provides almost all the information needed to predict the variation of the dependent variable.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.562a</td>
<td>.316</td>
<td>.295</td>
<td>430.087249</td>
<td>1.109</td>
</tr>
</tbody>
</table>

Based on output numbers are obtained R Square of 0.316 or 31.6%. This shows that the percentage of contributions to the influence of the independent variable (Value Added Intellectual Coefficient) to the dependent (firm value) of 31.6% or the variation of the independent variables used is only able to explain 31.6% of the dependent variable while the remaining 68.4% is influenced by other independent variables not included in this study.

**DISCUSSION**

This research proves that intellectual capital measures reduce VAIC™ positive effect on firm value as measured using PBV. The results of this study are in line with the hypothesis that the researchers proposed, namely Intellectual Capital influence on Firm Value. The results of this study indicate that intellectual capital positive effect that is with the value of $t_{\text{count}}$ 3.959 > $t_{\text{table}}$ (1.691), and a sig value of 0.000 < 0.05.

Intellectual capital measured using the VAIC™ can increase the value of the company, because the value of the company can be created when the company able to produce something more than the resources that have been invested to create value, therefore business strategy is directed at achieving these goals, so that there is increased pressure and responsibility on shareholders and employees to create corporate value that can be achieved by investing in intellectual capital (Ulum, 2009). Firm value is obtained from demand and supply, if the supply is greater from demand will result in higher profits (Pulić in Ulum, 2009).

Test result Intellectual Capital has a positive effect on firm value, this shows that the company is capable of managing human capital who have the knowledge and skills in carrying out an existing job at the company. And structural capital which information technology systems support the company and operational documents that
support the company. And also able to manage organizational capital which the company has competence. Which well and combines systems to create corporate innovation and the ability to create organizational value with a supportive and efficient strategy. The results of this study are in line with the research of Ajeng Ayu Utari, Wawan Sukmana, and Laras Pratiwi (2021).

5. CONCLUSION

After conducting research on 12 manufacturing companies in the basic and chemical industry sectors with the last 3 years used in this study, there were 36 samples listed on the Indonesia Stock Exchange for the 2019-2021 period, and this research was carried out due to the phenomenon of declining stock prices in manufacturing sector companies. basic and chemical industries due to the Covid’19 pandemic. Therefore, this study to determine the effect intellectual capital on company value. Based on the results of the tests that have been carried out, the following conclusions are obtained:

a. The coefficient of determination ($R^2$) of 0.316 or 31.6%. This shows that the percentage of the influence of the independent variables (VACA, VAHU and STVA) on the dependent variable Firm Value is 31.6% or the variation of the independent variables used is only able to explain 31.6% of the variable depend while the remaining 68.4% is influenced by other variables not included in study.

b. VAIC™ ($X_1$) has a significant effect on Firm Value (Y). This is indicated by the value $t_{\text{count}}$ of (3.959) greater than $t_{\text{table}}$ of (1.691) and a significance result of 0.000 is smaller than the specified significance level of 0.05, so it is concluded that VAIC™ ($X_1$) has a significant effect on Firm Value (Y).

6. SUGGESTION

a. For company financial management

Financial management is advised to pay more attention Intellectual Capital in increasing the Company Value.

b. For investors

The results of this study can contribute to investors investing by looking Intellectual Capital which can increase the value of the Company as a material consideration in making investment decisions.

c. For further researchers

For future researchers it is suggested to add other variables that affect firm value and add more years of observation, this is because Intellectual Capital has an influence for the long term, so it can produce better information and support.

d. For writers

This research was conducted as a medium for applying theories in financial management that have been studied in lectures so that they can understand the knowledge that has been studied better, add references and theoretical insights regarding financial statement analysis.

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