

## EVA as an indicator of financial performance in Tech companies during the Covid-19 pandemic

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### Abstract

*During the Covid-19 pandemic, many technology companies recorded sales volume increases. It happened because the pandemic pushed everyone to utilise technology devices for daily activities. Therefore, it drives the sales of technology companies to improve. This research uses the EVA (Economic Value Added) indicator as a financial analysis tool to evaluate the financial performance of companies in the technology sector on the Indonesia Stock Exchange before and during the Covid-19 pandemic. This research uses technology companies' financial statements from January 2019 - December 2020 as secondary data. The research analysis is in the form of a descriptive analysis of EVA calculation. The findings revealed that two of the four selected technology companies have a positive EVA value, which indicates that the two companies have been able to provide added value from their operational activities even before the Covid-19 pandemic occurred in Indonesia. Meanwhile, another company generate a negative EVA, which suggests that the company's management has not been able to create added value for the company. The company's ability to maintain financial sustainability represented by EVA value is ultimately not only defined by certain situations, such as a pandemic, but also by its ability to formulate a capital structure strategy.*

**Keywords:** Technology, Finance, Economic Value Added, Covid-19, Stock Exchange.

### Introduction

Currently, the world is encountering a global economic crisis due to the pandemic (Grabia, 2022). In January 2020, Covid-19 started to spread in China, and then in February and March 2020, it was declared a global pandemic (Achim & Borlea, 2014). The pandemic causes a massive problem that resulted in a large-scale financial crisis that affected the global economy. The impact of the Covid-19 pandemic has caused significant shifts in business performance and created shocks to the Indonesian various economic sectors (Muttaqin et al., 2020). Although the economy is weakening, on the other hand, it is also

encountering an increase in electronic commerce (e-commerce). In Indonesia, many electronic companies recorded an increase in sales volume during this pandemic (Hamid, 2012). The reason is that people avoid all things related to face-to-face activities directly (offline) and prefer physical distancing to prevent the spread of Covid-19 (Ayu & Lahmi, 2020).

The same thing also happens with many sectors in Indonesia. Initially, the utilisation of technology was an option, but the pandemic forced companies to conduct their business without being constrained by distance and time (Krabec & Čížinská, 2017). The Covid-19 pandemic has changed human life, especially the application of technology to facilitate learning, business activities, buying, and selling transactions (Ayu & Lahmi, 2020). Utami (2020) discovered that the implementation of work from home (WFH) and online learning resulted in increased use of technology so that the level of income from the technology sector in Indonesia also increased (Hilaliyah et al., 2022).

During the covid-19 pandemic, companies must survive and maintain a stable performance. Companies could maintain their performance by ensuring their financial performance is acceptable, secure, and growing (Kurnianingsih & Rahayu, 2010). The company must prepare good financial statements to provide information for various parties involved in economic decision-making (Sunardi, 2020). The financial statements can display financial performance, such as income growth and additional assets that can improve the overall performance and competitiveness compared to other companies (Altaf, 2016). Financial statements prepared before and during the covid-19 pandemic must uphold the accountability principle. Financial statements are a tool to measure financial performance (Febriani et al., 2022). It implies that the financial statements prepared before and during covid-19 can provide comparative data on company performance. Therefore, we could assess the company's performance and formulate strategies to maintain its survival. The assessment of financial performance is one of the supporting factors to ensure business continuity in fierce competition (Cachanosky & Lewin, 2016).

Financial performance assessment is a tool for evaluate the impact and effectiveness of managerial policies taken by management. Economic Value Added (EVA) analysis is one of the financial performance measurement tools to see the extent of a company's effectiveness in generating a return on investment (Noronha et al., 2021). The purpose of EVA analysis is as a general measure of company performance, a tool for management, evaluation, and financial analysis (Berzakova et al., 2015). Companies that use EVA indicators should be able to describe their economic benefits. Its significant advantage over conventional approaches is an understandable combination of a company's economic/financial performance and the level of risk required to achieve that performance (Berzakova et al., 2015).

EVA is the most sophisticated business performance measurement instrument based on value management principles. The reasons for using this instrument are the relatively simple approach compared to other evaluation criteria and the possible complex application of this indicator in the management system. EVA serves as a business performance measure, management system, motivation method, and way of thinking (Berzakova et al., 2015). According to Birgham & Ehrhardt (2007) EVA is used as a measurement tool that focuses on

managerial effectiveness and displays value creation in a certain period (Aviny, 2022). Based on this, EVA can be used to measure financial performance and the company's ability to create real economic value during the Covid-19 pandemic. In addition, EVA is a measuring tool that can support financial ratio analysis so that financial performance measurements are more accurate (Zufandita & Cerya, 2022).

Given the current economic conditions and the urgency of acceptable financial performance, it is necessary to conduct a study using EVA analysis as an indicator of financial performance that leads to a strategy formulation to ensure financial sustainability, especially during the Covid-19 pandemic (Noronha et al., 2021). This study examines the performance of companies in the technology sector that are listed on the Indonesia Stock Exchange (IDX) before and during the Covid-19 pandemic. Through EVA analysis, it is hoped that the research findings will deliver recommendations to the companies in the technology sector so they able to continue to grow, financially sustainable, and able to compete in facing global challenges.

### **Research Methods**

This research uses a quantitative approach. The research object is companies in the technology sector listed on IDX. Companies in the technology sector were chosen as the research object because, during the Covid-19 pandemic, their sales volume increased. However, further analysis is needed to investigate whether the increase in sales volume supports economic value creation. The sampling technique is non-probability sampling using purposive sampling. The sample criteria are technology sector companies listed on the IDX for at least ten years because they are considered well-established in conducting business activities. The calculation period used in this study is from January 2019 - December 2020 because it can provide an overview of the company's financial performance before and during the Covid-19 pandemic in Indonesia.

The hypothesis tested in this study are:

$H_0$ : *There was no difference in the company's financial performance before and during the pandemic*

$H_1$ : *There are differences in the company's financial performance before and during the pandemic*

Based on the criteria previously mentioned, four companies were selected as samples. Then we calculate EVA to discover whether they succeeded in creating economic value due to increased sales during the Covid-19 pandemic. Table 1 summarizes the list of companies involved in this study:

**Table 1. Sample of companies in the technology sector listed on IDX**

| No | Code | Company's Name              | Listing Date     |
|----|------|-----------------------------|------------------|
| 1  | KREN | Kresna Graha Investama Tbk. | 28 Juni 2002     |
| 2  | LMAS | Limas Indonesia Makmur Tbk. | 28 Desember 2001 |
| 3  | MTDL | Metrodata Electronics Tbk.  | 9 April 1990     |
| 4  | PTSN | Sat Nusapersada Tbk.        | 8 November 2007  |

The data used in this research is secondary data in form of quarterly financial statements from January 2019 - December 2020. The financial

statements are obtained from the IDX website or the company's official website. Data analysis in this study follows the subsequent stages (Dewi, 2017; Sunardi, 2020):

- a. Prepare the data needed for calculating EVA from the company's financial statements starting from January 2019 – December 2020.
- b. Calculating Net Operating After Tax (NOPAT) using the formula below (Brigham & Houston, 2010 in Sunardi, 2020 & Dewi, 2017):

$$\text{NOPAT} = \text{EBIT} \times (1-T) \quad (1)$$

Where EBIT is earning before interest and tax; T is the tax rate

- c. Calculate capital charges using the formula below (Margaretha, 2011 in Sunardi, 2020 & Dewi, 2017) :

$$\text{Capital charges} = \text{WACC} \times \text{Invested capital}$$

Where WACC is the weighted average cost of capital

- 1) WACC is calculated using the formula below (Margaretha, 2011; Prawironegoro, 2018 in Sunardi, 2020 & Dewi, 2017):

$$\text{WACC} = W_d K_d + W_e K_e \quad (2)$$

The stages of calculating WACC are as follows:

- a)  $W_d = \text{Total debt} / (\text{Total debt} + \text{Equity})$
- b)  $W_e = \text{Total equity} / (\text{Total debt} + \text{Equity})$
- c)  $K_d = K_{dbt} \times (1-T)$   
 $K_{dbt} = \text{Interest expense} / \text{long-term debt}$   
 $T = (\text{interest expense} / \text{earning before tax}) \times 100\%$
- d)  $K_e = \text{ROE} = \text{earning after tax} / \text{total equity}$

Where  $W_d$  is total debt relative to equity structure;  $W_e$  is total equity relative to equity structure;  $K_d$  is the cost of debt;  $K_e$  is the cost of equity;  $K_{dbt}$  is interest rate before tax; and ROE is the return on equity.

- 2) Invested capital is calculated using the formula below (Young & O'Byrne, 2008 in Sunardi, 2020 & Dewi, 2017):

$$\text{Invested capital} = \text{long-term debt} + \text{shareholder's equity} \quad (3)$$

- d. Calculate EVA using the formula below (Sartono, 2010 in Sunardi, 2020 & Dewi, 2017):

$$\text{EVA} = \text{NOPAT} - (\text{WACC} \times \text{Invested capital}) \quad (4)$$

- e. Analyze the results of EVA calculations using the interpretation below as guidance (Sunardi, 2020):
  - If the EVA value > 0, then the company has succeeded in creating added value from its operational activities.
  - If the EVA value = 0, then all profits are employed to pay liabilities to creditors and shareholders' return.
  - If the EVA value < 0 then the company is unable to create added value from its operational activities.
- f. Conduct paired t tests to compare EVA values before and during the pandemic, using the following formula (Johnson, 1994):

$$t = \frac{\bar{d}}{s_d/\sqrt{n}} \quad (5)$$

*df* is degrees of freedom =  $n - 1$

$\bar{d}$  is the mean of the differences between the paired or related observations

$s_d$  is the standard deviation of the differences between the paired or related observations

$n$  is the number of paired observations

g. Draw conclusions based on the analysis.

### Result and Discussions

Concerning the EVA calculation, further discussion is needed to analyze EVA value along with its components, such as NOPAT (Net Operating Profit After Tax), WACC (Weight Average Cost of Capital), and Invested Capital. Table 2 below display the value of KREN EVA and its component in 2019 and 2020:

**Table 2. Summary of EVA and its Components of KREN 2019-2020 (Expressed in Thousands of Rupiah)**

| Info. | 2019      |           |           |           |
|-------|-----------|-----------|-----------|-----------|
|       | Mar.      | Jun.      | Sep.      | Des.      |
| Nopat | 141,2013  | 250,135   | 356,280   | 410,580   |
| Wacc  | 4.33%     | 8.55%     | 11.18%    | 12.29%    |
| IC    | 3,658,655 | 2,998,275 | 3,178,089 | 3,586,160 |
| EVA   | -17,270   | -6,156    | 1,055     | -30,126   |
| Info. | 2020      |           |           |           |
|       | Mar.      | Jun.      | Sep.      | Des.      |
| Nopat | 27,729    | 43,989    | -205,909  | -230,869  |
| Wacc  | 2.18%     | 2.59%     | -3.78%    | -4.58%    |
| IC    | 3,220,939 | 3,148,671 | 2,907,489 | 2,912,812 |
| EVA   | -42,443   | -37,661   | -96,032   | -97,399   |

The NOPAT value of KREN in 2019 displayed an increase in each quarter. The increase in NOPAT value was due to operating profit improvement for each quarter. The increase in NOPAT value throughout 2019 indicated that they display good operational performance before the Covid-19 pandemic. However, during the Covid-19 pandemic in 2020, their NOPAT value decreased significantly. Operating profit in the first and second quarters of 2020 experienced an extreme decrease compared to the first and second quarters of 2019. The third and fourth quarters of 2020 showed negative values indicating they experienced an operating loss. Hence, it pushed the value of NOPAT in 2020 to a free fall and even resulted in negative values in the third and fourth quarters. The decline in NOPAT shows that the COVID-19 pandemic harmed the operational performance of PT. Kresna Graha Investama Tbk. The WACC value of PT. Kresna Graha Investama Tbk experienced an increase throughout 2019. It suggests that before Covid-19, they have a high cost of capital. It also indicates the high risk associated with the increasing percentage of the cost of capital throughout 2019. However, in 2020 when the Covid-19 pandemic hit Indonesia, the value of WACC underwent a significant decline. It is due to the increase in

the cost of debt, a decrease in the cost of equity, an increase in the proportion of debt to capital, and a reduction in equity to capital proportion. The decline in WACC in 2020 shows that they trying to lower the cost of equity during the pandemic. PT Kresna Graha Investama will probably try to reduce the value of WACC in 2020 to provide added economic value during the pandemic.

PT Kresna Graha Investama had a decreased invested capital value in 2019. It happened because of the increasing amount of long-term debt owned by the company before the Covid-19 pandemic. The increase in long-term debt continued when the Covid-19 pandemic hit Indonesia in 2020, resulting in the declining value of invested capital. Long-term debt that continues to grow also increases the company's cost of debt.

The EVA value of KREN in 2019 is negative. A positive EVA value was only obtained in the third quarter of 2019. A negative EVA value in 2019 revealed that before the Covid-19 pandemic, it had not been able to create added value from its operational activities. Although before the Covid-19 pandemic, the NOPAT value increased, the cost of capital also increased, causing most of the EVA value in 2019 is negative. The negative EVA value also resumed in 2020. Hence, during the Covid-19 pandemic, they were also unable to provide added economic value from its operational activities. The declining EVA value in 2020 is due to a decrease in NOPAT caused by the Covid-19 pandemic.

Although during the pandemic the company was able to reduce its cost of capital, the significant decline in NOPAT drives the value of EVA into a free fall. In retrospect, they increased their long-term debt in 2020. Although the cost of capital declining, the increase in long-term debt has also affected NOPAT and invested capital, causing EVA value to become increasingly negative during the pandemic. Table 3 below display the value of LMAS EVA and its component in 2019 and 2020:

**Table 3. Summary of EVA and its Components of LMAS 2019-2020 (Expressed in Thousands of Rupiah)**

| Info. | 2019       |         |           |          |
|-------|------------|---------|-----------|----------|
|       | Mar.       | Jun.    | Sep.      | Des.     |
| Nopat | 7,059      | 16,663  | 17,716    | 2,850    |
| Wacc  | 4.01%      | 8.71%   | 10.18%    | 2.06%    |
| IC    | 191,665    | 206,486 | 212,700   | 201,180  |
| EVA   | -635       | -1.323  | -3.929    | -424.358 |
| Info. | 2020       |         |           |          |
|       | Mar.       | Jun.    | Sep.      | Des.     |
| Nopat | -17,218    | 1,364   | -2,873    | 16,538   |
| Wacc  | -2,93%     | 5.22%   | 4.11%     | 16.52%   |
| IC    | 194.106    | 206.323 | 194.670   | 198.382  |
| EVA   | 10,101,424 | -9,409  | 5,368,063 | -16,227  |

The NOPAT value of PT. Limas Indonesia Makmur Tbk in 2019 indicated an increase in each quarter but decreased drastically in the fourth quarter. The increase in NOPAT value was due to operating profit improvement for each quarter. The increase in NOPAT value throughout 2019 indicated they had good operational performance before the Covid-19 pandemic. The impact of the Covid-19 pandemic that occurred in the fourth quarter of 2019 caused a decrease in the

value of NOPAT.

It continued in the following year when their NOPAT value fluctuated significantly. However, at the end of 2020, they succeeded in restoring the stability of the NOPAT value. Operating profit in 2019 increased but fluctuated in 2020. This condition also occurred in the third and fourth quarters of 2020 when the NOPAT showed a negative value in the previous quarter but managed to have a positive value even though the operating profit obtained was not as much as in previous quarters. However, they experienced a drastic decline again to a negative value, even though eventually they were able to improve the operating profit. The significant fluctuating value of NOPAT indicates that the COVID-19 pandemic has also harmed its operational performance.

The WACC value of PT. Limas Indonesia Makmur Tbk experienced an increase throughout 2019 and decreased significantly at the end of the year. It suggests that before the Covid-19 pandemic, they already possessed a high cost of capital. It also indicates the high risk encountered associated with the increasing percentage of the cost of capital throughout 2019. However, in 2020 the value of WACC experienced a decreasing condition. In the first quarter of 2020, the WACC value was negative but positive in the second and third quarters and significantly increased in the fourth quarter of 2020. Meanwhile, the significant expansion in the WACC value in 2020 demonstrates that they experienced an increase in interest costs. PT. Limas Indonesia Makmur Tbk is also trying to lower its cost of capital during the pandemic.

Meanwhile, a negative WACC value in March 2020 indicates that companies with low WACC are considered good because they are not high risk (Kamela, 2021). WACC will greatly assist the company in producing positive EVA so that it can provide economic added value for the company (Dewi, 2017). According to (Gulo, 2011) the lower the WACC value, the lower the company's risk and can provide positive added value for the company. The decline in WACC is usually also caused by an increase in the proportion of equity in the company's capital structure.

Presumably, they seek to maintain the value of WACC in 2020 to provide added economic value from operating activities. PT. Limas Indonesia Makmur Tbk had an increased value of invested capital in 2019. It is due to the increase in long-term debt held by the company before the Covid-19 pandemic. But the increase in long-term debt continued to decline when the Covid-19 pandemic hit Indonesia in 2020, resulting in the company encountering fluctuating value of invested capital. The long-term debt declines in 2020 suggests that it continues to conduct operational activities during the pandemic without long-term debt and trying to pay off its debt regularly.

The EVA value of PT. Limas Indonesia Makmur Tbk throughout 2019 is negative. It indicates that before the Covid-19 pandemic, the company is unable to create added value from its operational activities. Although before the Covid-19 pandemic, their NOPAT value increased (except in the fourth quarter of 2019), the cost of capital also increased, resulting in most of their EVA value being negative in 2019. The negative value of EVA continues to occur during 2020. Therefore, during the Covid-19 pandemic, they are still unable to provide added economic value from their operational activities. The increasing negative value of EVA in 2020 is due to the impact of Covid-19. But PT. Limas Indonesia Makmur

Tbk always tries to maintain its financial condition by increasing the operating profit. Table 4 below display the value of MTDL EVA and its component in 2019 and 2020:

**Table 4. Summary of EVA and its components of MTDL 2019-2020 (Expressed in Thousands of Rupiah)**

| Info. | 2019      |           |           |           |
|-------|-----------|-----------|-----------|-----------|
|       | Mar.      | Jun.      | Sep.      | Des.      |
| Nopat | 124,487   | 221,042   | 380,881   | 220,723   |
| Wacc  | 2.60%     | 5.46%     | 8.47%     | 5.01%     |
| IC    | 2,874,794 | 2,875,883 | 3,033,579 | 3,188,301 |
| EVA   | 49,631    | 64,072    | 124,056   | 60,834    |
| Info. | 2020      |           |           |           |
|       | Mar.      | Jun.      | Sep.      | Des.      |
| Nopat | 128,617   | 220,935   | 396,392   | 545,391   |
| Wacc  | 3.26%     | 4.96%     | 7.83%     | 9.86%     |
| IC    | 3,317,100 | 3,332,088 | 3,470,627 | 3,663,801 |
| EVA   | 20,477    | 55,639    | 124,781   | 184,159   |

The calculation results of MTDL indicate that the NOPAT value from June 2019 to June 2020 is relatively stable. In September 2019, there was an increase in NOPAT caused by sales growth that increased their profit. Their WACC value on average is less than 10%. It suggests that the total cost of capital per month is less than 10%. The WACC value in September 2019 increased in line with the NOPAT, but the WACC value decreased again from December 2019 to September 2020. It indicates that before and at the beginning of the pandemic, the WACC value decreased, but from June 2020 to December 2020 increased. Hence, it implies that at the beginning of the pandemic, there was an increase in the interest expense borne by the company which leads to an increased cost of debt.

PT Metrodata Electronics Tbk. has an investment capital value that continues to increase before and during the Covid-19 pandemic. This growth was due to the long-term debt increase in 2019 and 2020. In addition, their total equity also consistently increased before and during the pandemic. Therefore, it also affects the cost of debt and the cost of equity borne by the company.

The EVA of MTDL in 2019 had a positive value and increased until the third quarter of 2019. In the fourth quarter of 2019 and the first quarter of 2020, EVA value decreased but remained positive. From the second quarter of 2020 until the fourth quarter of 2020, the EVA value increased again. It suggests that before the Covid-19 pandemic, the company was able to create added value from its operational activities. The decline of EVA value in the fourth quarter of 2019 and the first quarter of 2020 was due to fluctuating market conditions at the beginning of the Covid-19 pandemic in Indonesia. Even so, they were able to increase EVA value from the second quarter of 2020 until the fourth quarter of 2020. Even though the economy was experiencing shocks due to the pandemic, PT Metrodata Electronics Tbk is still able to generate positive added value from its operational activities. Table 5 below display the value of PTSN EVA and its component in 2019 and 2020:



**Table 5. Summary of EVA and its components of PTSN 2019-2020 (Expressed in Thousands of Rupiah)**

| Info. | 2019        |             |             |             |
|-------|-------------|-------------|-------------|-------------|
|       | Mar.        | Jun.        | Sep.        | Des.        |
| Nopat | 2,339,424   | 5,844,738   | 9,256,837   | 10,000,920  |
| Wacc  | 0.85%       | 1.85%       | 2.79%       | 1.95%       |
| IC    | 84,352,890  | 90,467,617  | 97,499,969  | 98,994,044  |
| EVA   | 1,624,346   | 4,172,693   | 6,533,058   | 8,067,665   |
| Info. | 2020        |             |             |             |
|       | Mar.        | Jun.        | Sep.        | Des.        |
| Nopat | 4,785,934   | 7,281,815   | 11,536,578  | 14,472,926  |
| Wacc  | 2.48%       | 2.61%       | 4.36%       | 5.32%       |
| IC    | 100,474,229 | 107,298,429 | 107,276,825 | 107,163,602 |
| EVA   | 2,294,513   | 4,481,419   | 6,861,061   | 8,770,965   |

The NOPAT value of PT. Sat Nusapersada Tbk in 2019 exhibited an increase in each quarter. The growth in NOPAT value was due to an operating profit increase for each quarter. The increase in NOPAT value throughout 2019 indicated they had good operational performance before the Covid-19 pandemic. When Indonesia underwent the Covid-19 pandemic in 2020, the company's NOPAT value experienced a significant increase. The operating profit in the first and second quarters of 2020 increased compared to the first and second quarters of 2019. The third and fourth quarters of 2020 displayed an increasing value and indicated that they experienced operating profits. It pushed the NOPAT value in 2020 to increase even in the third and fourth quarters. The increase in NOPAT reveals that the COVID-19 pandemic caused a positive impact on their operational performance.

The WACC value of PTSN experienced an increase throughout 2019 but decreased at the end of the year. It suggests that before the Covid-19 pandemic hit Indonesia, the company had a high cost of capital. It also indicates the high risk borne by the company as a result of the increasing percentage of the cost of capital throughout 2019. However, in 2020 when the Covid-19 pandemic hit Indonesia, the value of WACC still experienced a substantial increase. The increase in WACC value was due to a decrease in the cost of debt, an expansion in the cost of equity, a reduction in debt to capital proportion, and an increase in the equity to capital proportion. Growing WACC in 2020 reveals that PTSN is working to raise its cost of capital during the pandemic. PT Sat Nusapersada will probably try to improve WACC value in 2020 to provide added economic value during the pandemic.

PT Sat Nusapersada had an increased value of invested capital in 2019. It is due to the increasing amount of long-term debt owned by the company before the Covid-19 pandemic. The long-term debt growth stopped when the Covid-19 pandemic hit Indonesia in 2020. It caused their invested capital value to decrease in the third and fourth quarters. Therefore, the decreasing amount of long-term debt leads to the reduction of the company's cost of debt.

The EVA calculation results of PT Sat Nusapersada Tbk in 2019 have a positive value. It is apparent in all quarters of 2019. Hence, it indicates that before the Covid-19 pandemic, the company was able to create added value from its operational activities. Although before the Covid-19 pandemic, the NOPAT value

increased, the cost of capital also grew but did not result in a negative EVA in 2019. The positive EVA value also continued in the following year, even though it had decreased in the first to the third quarter of 2020, the EVA value is still positive. Therefore, it reveals that during the Covid-19 pandemic, PTSN was able to provide added economic value from its operational activities. The increase in EVA value in 2020 is due to the growing NOPAT during the Covid-19 pandemic. In addition, during the pandemic, they experienced an increase in the cost of capital, but most of the NOPAT value increased and contributed to creating a positive EVA value. On the other hand, PTSN lowered its long-term debt in 2020 to sustain its debt costs during the pandemic. The cost of capital tends to increase in 2019 and 2020, but the long-term debt decline also affects the value of NOPAT and invested capital, causing EVA to remain positive during the pandemic.

The WACC is a component in determining EVA values. The WACC value is a sensitive variable, so after obtaining the EVA value of each company, it is necessary to carry out a robustness test to prove and reveal whether WACC can affect EVA value based on its high volatility. The robustness test in this study was carried out using a simple linear regression analysis between WACC as the independent variable and EVA as the dependent variable for each company. Based on WACC and EVA data based on four companies and a predetermined time period, the data in this study are panel data. The regression analysis in the robustness test uses panel regression with the help of Gretl software. The hypotheses used are as follows:

*H0: WACC has no significant effect on EVA.*

*H1: WACC has a significant effect on EVA.*

**Table 6. Robustness Test for WACC**

|       | coefficient  | Std. error  | t-ratio | p-value   |
|-------|--------------|-------------|---------|-----------|
| Const | 2.84911e+06  | 772529      | 3.688   | 0.0009*** |
| WACC  | -2.19525e+07 | 1,19237e+07 | -1.841  | 0.0755*   |

Table 6 shows the result of WACC robustness test value for EVA. The data processing reveals that the p-value of the WACC variable is 0.0755 and  $\alpha$  (5%). It means that H0 is accepted, so WACC has no significant effect on EVA. The robustness test result in this study reflects research findings by Kamela (2021), which argue that the company's condition is not only measured by WACC but also by other external factors such as trust toward companies and investor belief. It suggests that in the context of this study, even though the WACC value has high volatility, it does not significantly impact the EVA value. In general, the EVA value is not determined by the WACC only but also by other internal factors, such as the ability to generate operating profit and the amount of investment value. In addition, external factors also play a part, such as companies' reputation and investor belief, which will affect the level of investment.

Table 7 indicates that PT. Metrodata Electronics Tbk (MTDL) and PT. Sat Nusapersada Tbk (PTSN) consistently created added value from its operational activities during 2019 & 2020. During the Covid-19 pandemic, they still delivered satisfactory performance while generating economic added value from their operational activities.

**Table 7. Summary of EVA Values of Companies in Technology Sector Listed on IDX (2019-2020)**

| Info. | 2019       |           |           |           |
|-------|------------|-----------|-----------|-----------|
|       | Mar.       | Jun.      | Sep.      | Des.      |
| Nopat | -17,270    | -6,156    | 1,055     | -30,126   |
| Wacc  | -635       | -1.323    | -3.929    | -424.358  |
| IC    | 49,631     | 64.072    | 124,056   | 60,834    |
| EVA   | 1,624,346  | 4,172,693 | 6,533,058 | 8,067,665 |
| Info. | 2020       |           |           |           |
|       | Mar.       | Jun.      | Sep.      | Des.      |
| Nopat | -42,443    | -37,661   | -96,032   | -97,399   |
| Wacc  | 10,101,424 | -9,409    | 5,368,063 | -16,227   |
| IC    | 20,477     | 55,639    | 124,781   | 184,159   |
| EVA   | 2,294,513  | 4,481,419 | 6,861,061 | 8,770,965 |

The constant positive EVA value created by the two companies was due to the growing NOPAT value from 2019 - 2020. It suggests an increase in the operating profit despite the Covid-19 pandemic. The cost of capital and the cost of debt is rising, but the growth of NOPAT throughout 2019 – 2020 is offsetting the increase in those costs and resulting in a positive EVA value.

The comparison of EVA values from the four sample companies reveals that the Covid-19 pandemic is not the sole factor affecting the capability of companies in the technology sector to generate positive added value from their operational activities. Even though the covid-19 pandemic has led to an increase in online learning (Rofi'ah et al., 2021) an upsurge in e-commerce transactions (Ayu & Lahmi, 2020), and changes in individual behaviour toward electronic devices (Kusno & Muhammadiyah, 2020), but the findings in this study indicate that the increase in technology usage during the pandemic does not always correlate with a proliferation in the operating profit of companies in the technology sector listed on IDX. Table and graph above display that before the Covid-19 pandemic, both PT. Kresna Graha Investama Tbk (KREN) and PT. Limas Indonesia Makmur Tbk (LMAS) had not been able to create a positive EVA value. It implies that during the Covid-19 pandemic occurred, both companies did not deliver satisfactory performance and were incapable of creating economic added value from their business activities.

The EVA analysis of the four companies insinuates that the company's ability to generate economic added value from its business activities is not influenced solely by special situations such as a pandemic. The ability to contribute positive added value is hand in hand with the capability of each company to encourage increased revenue and financial control. The pandemic situation is unpredictable, but firm financial management is a supporting force to deal with the economic turbulence caused by the pandemic. Eventually, companies that persist creates positive EVA values during the pandemic are companies that hold robust financial or business fundamentals.

The EVA analysis companies in the technology sector listed on the IDX displays that companies could use EVA as an indicator for their management performance. It is in line with the statement of (Berzakova et al., 2015) that EVA is a fundamental indicator of value management and is applicable as a general measure of company performance. EVA as an indicator of company management

performance is also useful as a tool to maintain financial sustainability.

This study focuses on using EVA as a tool to measure the financial performance of technology companies before and during the Covid-19 pandemic in Indonesia. The application of EVA has proven to offer a comparison of the financial performance of these companies before and during the pandemic. It indicates that EVA can become a benchmark for the company's financial and operational management capability to generate added value for its shareholders. These findings aligned with the statement (Sunardi, 2020) that EVA is useful for asses a company's financial performance.

EVA is described as a good predictor of forthcoming business performance (Kumar & Subramanyam, 2017). Hence EVA is also proper as a means to achieve financial sustainability. The findings in this study reveal that there are companies that generate positive and negative EVA values during the Covid-19 pandemic. Companies that can formulate their capital structure policies wisely are likely to be able to create positive EVA despite encountering economic turbulence during the pandemic. Therefore, EVA is helpful to measure whether a company can accomplish or maintain financial sustainability. The company's ability to retain its financial sustainability by EVA value is ultimately not solely determined by special situations such as a pandemic but also by the ability to develop its capital structure strategy.

## **Conclusion**

Based on the research findings and discussion conducted on the four companies in the technology sector listed on IDX using the Economic Value Added (EVA), we could conclude as follow: Overall financial performance of PT. Kresna Graha Investama Tbk., PT Limas Indonesia Makmur Tbk., PT. Metrodata Electronics Tbk., and PT. Sat Nusapersada Tbk reveals fluctuating performance during the Covid-19 pandemic. Companies that consistently create added value from their operational activities during 2019 and 2020 are PT. Metrodata Electronics Tbk (MTDL) and PT. Sat Nusapersada Tbk (PTSN). It indicates that the EVA value of both companies tends to have a value greater than 0 or positive. It exhibits that they have been able to provide added value from their operational activities even before the Covid-19 pandemic occurred in Indonesia. Furthermore, during the Covid-19 pandemic, both companies still delivered satisfactory performance while creating economic added value from their operational activities. The EVA value less than 0 or negative was obtained by PT. Kresna Graha Investama Tbk and PT Limas Indonesia Makmur Tbk during 2019 and 2020 due to the return of net profit after tax generated by the company that is smaller than the cost of capital. It suggests that the management is incapable of creating added value and meeting investors' expectations during the Covid-19 pandemic. The results of the EVA comparison test between before and during the pandemic show that there are differences in EVA or financial performance before and during the pandemic. The EVA analysis is helpful in assessing companies' financial sustainability. The company's ability to maintain financial sustainability represented by EVA value is ultimately not exclusively determined by particular situations such as a pandemic but also by the ability to compose its capital structure strategy.

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