

# **Performance Analysis and Business Strategy using Economic Value Added (EVA) Method: A Case Study**

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## **Abstract**

The company was founded with the commercial purpose of obtaining profit, maximizing share value, and increasing sales & service. Companies must have good performance both financially and non-financially. A competent company can be identified through a description of the financial condition that reflects a well-structured and organized management process. Companies with superior and stable financial performance can attract and retain investors to continue to entrust their capital to the company. Financial performance assessment with profit and value orientation can use Economic Value Added (EVA). In a case study on a cable company in Indonesia, PT KMI Wire and Cable Tbk (KMI) suffered losses due to declining sales and the effects of the pandemic (2020). With the EVA method, financial performance is analyzed, and then we formulate a business strategy with the SWOT analysis method to obtain a tactical strategy and become a suggestion for managers to make decisions in strategy selection. Several strategies that can be considered are strengthening the private market by increasing tenders, expanding national and international business by using effective technology through online markets, reducing production costs by mass production of low-voltage cable types with industrial market coverage and housing, maintaining quality and competitive prices, strengthening distribution and marketing networks by conducting joint ventures for selling products in both national and international markets, strengthening the R&D team by involving universities in product innovation and managing CSR effectively so that the company automatically builds value through research activities and social actions involving educational institutions.

## **Keywords**

Key Performance Indicator, Business Strategy, EVA, and SWOT analysis

## **1. Introduction**

PT Kabelmetal Indonesia was founded in 1972 by Kabel-und Metalwerke Gutehoffnungshutte AG (a company from Germany, which later changed its name to Kabelmetal Electro GmbH). In 1974 KMI launched its first product under the KABELMETAL brand and was listed as a public company on the Indonesia Stock Exchange in 1992. In mid-2007, KMI introduced the brand "Kabelmetal Indonesia" for the domestic market and "KMI Wire and Cable" for the foreign market, which later became the company name of PT KMI Wire and Cable Tbk (KMI) on September 1, 2008. KMI is a supplier of quality power cables to state-owned companies or PT Perusahaan Listrik Negara (PLN) and is a supplier to the private and industrial sectors (oil & gas, mining) directly or through a chain of national distributors and resellers. KMI's products are aluminum power cables and copper power cables with a variety of low voltage power cables (up to 1kV), medium voltage power cables (3kV - 36 kV), and high voltage power cables (36 kV - 500kV), as well as power cables for special applications. The latest product innovation in 2020 is the river crossing subsea cables that have been installed and operating in the West Kalimantan area.

Certification is one form of excellence in a company. KMI has ISO 9002 (cable, aluminum & copper casting), ISO 14001 (environmental management system), ISO 9001 (cable production design control), and Quality Management system ISO 9001 version 2015, which defines the requirements for continual improvement and risk management on implementation. KMI obtained OHSAS 18001 or SMK3 (Indonesian version) for the occupational health and safety system, which was later refined with ISO 45001:2018 in September 2020. All Management Systems implemented in this company are assessed periodically every year.

KMI is a supplier of quality power cables to the Government - PT Perusahaan Listrik Negara (PLN) and is a supplier to the private and industrial sectors (oil & gas, mining) directly or through a chain of national distributors and resellers. KMI, which is a leading cable producer in Indonesia, suffered a loss of Rp 90.66 billion due to declining sales in 2020, a 63% decline in sales from PLN, which is one of KMI's partners (MarketNews.id 2020). A significant decline made KMI suffer losses, and this strengthened the decline in performance because of the pandemic.

The company was founded with the commercial purpose of obtaining profit, maximizing share value, and increasing sales & service. The company must have good performance both financially and non-financially. A competent company can be identified through a description of the financial condition that reflects a well-structured and organized management process. Companies with superior and stable financial performance can attract and retain investors to continue entrust their capital to the company. The financial condition reflects a well-structured and organized management process. In addition, the company must have a superior and stable financial performance to attract and retain investors to continue entrust their capital to the company. Financial management needs to analyze financial performance to provide financial reports to top management and stakeholders. Financial performance assessment with profit and value orientation can use Economic Value Added (EVA). The EVA method has a complete performance measure, addressing issues related to conflicts of interest in the company identified as short-term problems, investment decisions, and economic dependence (McLaren 2005).

Key performance indicators (KPIs) are important in running a company because they are the starting point of departure from a final destination so that we can measure the company's position against that initial goal. The purpose of the business organization or company in setting KPIs as a measuring tool is to see the progress or progress of the company. This study describes the financial condition and the underlying KPI of the company, which will then be analyzed, improved, and made recommendations as material for consideration in policymaking for management.

This study analyzes the business strategy of KMI, referring to the EVA and KPI values that the company has set, then evaluates the performance and formulation new strategy using the SWOT analysis method.

### **1.1 Objectives**

Declining sales and concerns about the loss of investors are problems that must be addressed at KMI immediately in running a business. Therefore, the purpose of this study is to measure financial performance with the EVA method, set financial KPIs, and formulate business strategies using SWOT analysis. The benefit of this research is to assist managers in evaluating financial performance and setting financial KPIs to achieve targets and value for the company. In addition, it can be useful for stakeholders, whether investors, customers, suppliers, or creditors, as an illustration of the feasibility of investing. Limitations in this study use the 2018-2020 annual report data, the data is secondary data, and financial analysis using the EVA method. The assumption in this study is that the results of the EVA calculation

are the level of achievement of the company's performance, and the results of the SWOT evaluation are a description of the company's internal and external.

## 2. Literature Review

### 2.1 Key Performance Indicator

Performance measurement is important in running a company as it is the starting point of departure from a destination so that we can measure the company's position against that initial goal. Key performance indicators (KPIs) are quantitative and qualitative metrics used to review progress toward an organization's goals, described and set as performance goals by departments and individuals, and will be reviewed regularly (Victoria 2010). KPIs are financial and non-financial indicators or indicators that help an organization define and measure success in terms of step-by-step progress towards long-term goals (Rattanachai et al. 2010). KPIs represent a set of indicators that focus on aspects of performance that are most important to an organization's current and future success (David Parmenter 2007).

The purpose of the business organization or company in setting KPIs as a measuring tool is whether it is by the objectives (on track), functioning properly, profitable, and as a means of improvement (Victoria 2010). Managers can determine where the company is, how it has performed in the past, track the progress of changes, plan and prepare, where the next steps will go, and what the future success will be, the leader needs a KPI to determine if it will be and how to do it to be successful (Pacific Crest 2012). Another goal in setting KPIs is by looking at the time dimension (Look back; Look forward), which is to be able to look back as an evaluation and to be able to look ahead as a target planning process. Organizational perspective (Bottom-up; Top-down; Compare) is an evaluation process from the management level top to bottom and vice versa and comparing between divisions. Human perspective (Motivate; Compensate) namely compensation in the form of reward and punishment can be a motivation for individuals in the future.

### 2.2 Economic Value Added (EVA)

Financial performance is an important part of achieving business goals. Financial performance can be measured by the EVA method by measuring the net profitability of the cost of capital. EVA is a measure of economic profit, namely the profit earned after deducting the opportunity cost of capital (equity & debt) invested to generate profits (Ross 1999). EVA is calculated by taking the company's net operating profit after tax (NOPAT) and deducting the cost of capital. EVA is a surplus that has been deducted by investment costs over a certain period (McLaren 2005).

The EVA equation was developed by Alfred Marshal in 1890 (Sharma & Kumar 2010).

$$EVA = NOPAT - (TCE \times WACC)$$

Where: NOPAT = Net operating profit after tax, TCE = Total capital employed, WACC= Weighted average cost of capital, NOPAT descended from net operating profit (NOP) by deducting taxes (Mäkeläinen 1998).

$$NOPAT = NOP \times (1 - tax)$$

In another study, NOPAT was formulated with Earnings Before Interest and Tax (EBIT) (Kaluzhskikh 2015).

$$NOPAT = EBIT \times (1 - tax)$$

WACC is obtained by the equation (Malichova et al. 2017).

$$WACC = rd(1 - t) * \frac{D}{C} + re * \frac{E}{C}$$

Where: rd = debt cost, re = cost of equity, t = tax, D = amount of debt to capital structure, E = amount of capital-to-capital structure, dan C = long-term invested capital.

$$d = \frac{\text{interest expense}}{\text{total debt}} \times 100\%$$

$$D = \frac{\text{total debt}}{\text{total debt} + \text{equity}} \times 100\%$$

$$re = \frac{NOPAT}{\text{total equity}} \times 100\%$$

$$E = \frac{\text{total equity}}{\text{total debt} + \text{equity}} \times 100\%$$

$$t = \frac{\text{tax expense}}{NOP} \times 100\%$$

$$C = D + E = 1$$

The data used in the EVA calculation are net income, the total cost of capital, and the total invested capital (Meutia Dewi 2017). Figure 1 shows the steps to calculate EVA (Malichova et al. 2017).

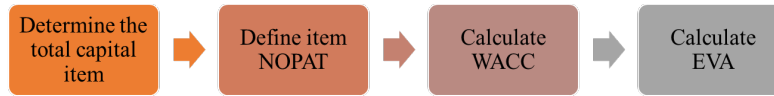


Figure 1. The steps EVA calculation

Large companies such as Coca-Cola, Diageo, Lilly (Eli), Guidant, and SPX use EVA as a guide to creating value for their shareholders with the criteria that if a positive EVA value means operating profit is greater than capital, negative EVA means lower profits from capital (Grant 2003). Besides that, according to Grant (2003), EVA takes into account the costs of debt and capital, which gives management an advantage in making investment decisions like shareholders. A positive EVA indicates that the company has succeeded in adding value to investors and increasing the asset value, and a negative EVA indicates that the company has failed to add value and further reduced the asset value (Grant 2003).

### 2.3 SWOT Analysis

SWOT analysis is a view of direction and implementation that can be combined with other strategic planning tools as a guide in policy making (Helms & Nixon 2010). SWOT can be used to formulate strategies by measuring internal factors in the form of strengths and weaknesses, as well as external factors in the form of threats and opportunity analysis (Pratiwi et al. 2017). Comparison of large companies engaged in the field of two-wheeled vehicles with electric energy sources by explaining the strengths, weaknesses, opportunities, and threats and how the company faces them (Istiqomah et al. 2020). Designing a business strategy in the form of an appropriate marketing strategy using the SWOT analysis method with four strategies, namely Strength-Opportunity, Weakness-Opportunity, Strength-Threat, and Weakness-Threat (Lupita et al. 2017). The SWOT Matrix formulates tactical strategies through four different sides (Sammut-Bonnici & Galea 2014). The SWOT matrix can be seen in Figure 2.



Figure 2. SWOT Matrix

### 2.4 Business Strategy

A planned and integrated set of commitments and actions known as a strategy is used to maximize core competencies and gain a competitive advantage (Hitt et al. 2007). An alliance strategy is a corporate strategy that combines resources and capabilities to achieve a competitive advantage, one of which is a joint venture in which two or more companies establish a new and legally independent company to share resources and capabilities to gain a competitive advantage (Hitt et al. 2007). Doing business in a pandemic situation is considered very difficult. Companies must survive and continue to operate with so many limitations. The situation is some companies take steps to downsizing. Downsizing is a strategy to reduce the number of company employees and the number of operating units (Hitt et al. 2007). Business strategies with a CSR approach for companies include protecting the environment and being responsible for environmental conservation, which can automatically improve the company's image and productivity (Oh et al. 2017). R&D investment is one of the essential sustainability strategies for companies to develop unique products as a character and as a strength to gain a competitive advantage (Yang and Lai 2021). Business strategy can be done by prioritizing products that are affordable, easy to obtain, have a wide market share, and continue to innovate

products (Kawuri et al. 2022). According to Pratama et al. (2022), several business strategies that can be carried out in a company are a strong marketing strategy, building brand equities, presenting the highest quality products, building a strong supply chain, and having a research and innovation team that emphasizes consumer needs. Providing after-sales service, maintenance, installation and engineering consulting, product innovation, and building factories in countries with the highest interest in products is a form of business strategy (Srikandi et al. 2022). The business strategies revealed by Rahmania et al. (2022) in her research are technological innovation, new business investment, customer focus, acquisition, and market expansion.

### 3. Methods

The thinking mechanism in this research starts from the problem of declining sales, which can result in decreased company performance which will have an impact on investment. Beginning with a literature study on KPI and EVA as well as collecting data from previous research using the Google engine. Formulate problems in the company being studied, then perform KPI and EVA analysis. The result is a strategy formulated with a SWOT analysis. The next step is to provide strategic recommendations for the company and conclusions from the research. The framework can be seen in Figure 3.

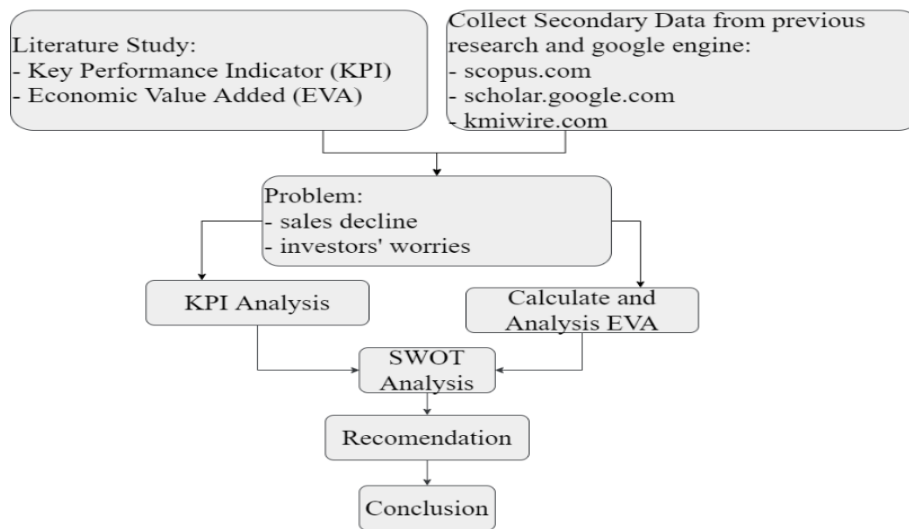


Figure 3. Methodology

### 4. Data Collection

The data used for each of the data processing steps can be seen in Figure 4.

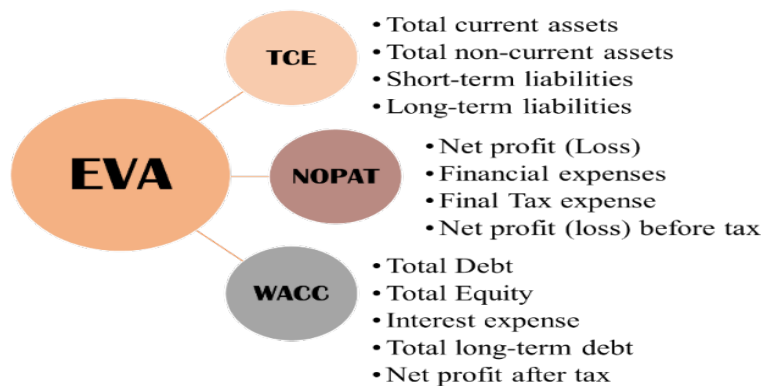


Figure 4. Data for EVA calculation

#### 4.1 Total Capital Employed (TCE)

Determining the total capital item is the first step of the EVA calculation process. Tables 1 and 2 are data on all capital owned by KMI.

Table 1. Estimated total assets from 2018-2020

Description of Capital		2018	2019	2020
		(IDR-Billion)	(IDR-Billion)	(IDR-Billion)
<b>Total current assets</b>	Cash & cash equivalents	93	57	276
	Other financial assets	0.4	2	436
	Accounts Receivable - related parties	19.6	9	-
	Accounts Receivable - third parties	1,080	1,533	675
	Other receivables - related parties	-	0.06	-
	Other receivables - third parties	22	77	39
	Supply	836	720	575
	Down payment	9	2	3
	Prepaid tax & tax refund bill	106	153	97
	Prepaid expenses	8	5	4
	Non-current assets held for sale	-	-	400
	<b>Total Current Assets (p)</b>	<b>2,174</b>	<b>2,558</b>	<b>2,505</b>
<b>Total non-current assets</b>	Deferred tax assets	59	59	39
	Right of Use Assets	-	-	104
	Investment property	38	38	-
	Fixed assets	953	878	345
	Advance for purchase of fixed assets	3	7	6
	Other assets	18	16	11
	<b>Total non-current assets (q)</b>	<b>1,071</b>	<b>998</b>	<b>505</b>
<b>Total estimated assets = p+q</b>		<b>3,245</b>	<b>3,556</b>	<b>3,010</b>

Table 2. Total Asset

Operating asset value	2018	2019	2020
	(IDR-Billion)	(IDR-Billion)	(IDR-Billion)
Total estimated assets (a)	3,245	3,556	3,010
Short-term liabilities (b)	882	879	473
Long-term liabilities (c)	332	295	186
<b>Total Asset = a-(b+c)</b>	<b>2,031</b>	<b>2,382</b>	<b>2,351</b>

#### 4.2 Net Operating Profit After Tax (NOPAT)

The second step in the EVA calculation process is calculating NOPAT, which can be seen in Table 3.

Table 3. NOPAT calculation

NOPAT	2018	2019	2020
	(IDR-Billion)	(IDR-Billion)	(IDR-Billion)
Net Profit (Loss) for the year (a)	236	395	- 74
Financial burden (b)	32	28	- 11
Tax Burden (c)	32	48	- 6
Net income before tax (d)	309	499	- 57
Operating Profit (Loss) ( EBIT)(e) = a+b+c	300	471	- 91
Tax rate (f)= c/d	0.104	0.096	0.105
1-Tax (g) = 1-f	0.896	0.904	0.895
<b>NOPAT = e*g</b>	<b>269</b>	<b>426</b>	<b>- 81</b>

### 4.3 Weighted Average Cost of Capital (WACC)

WACC is the third step in determining EVA, and it can be seen in Table 4.

Table 4. WACC Calculation

WACC	2018	2019	2020
	(IDR-Billion)	(IDR-Billion)	(IDR-Billion)
Total Amount of debt	882	879	473
Total Equity	2,031	2,382	2,350
Interest expense	32	28	11
Total long-term debt	332	295	186
Net profit (loss) after tax	236	395	- 74
rd	0.036	0.032	0.023
re	0.116	0.166	-0.031
t	0.104	0.096	0.105
1-t	0.896	0.904	0.895
D	0.303	0.270	0.168
E	0.697	0.730	0.832
C	1	1	1
<b>WACC</b>	<b>0.091</b>	<b>0.129</b>	<b>-0.023</b>

### 4.4 Economic Value Added (EVA)

After the data on total capital (TCE), NOPAT and WACC have been determined, and the EVA calculation can be carried out. EVA calculation can be seen in Table 5.

Table 5. EVA Calculation

EVA Calculation	2018	2019	2020
NOPAT	269	426	- 81
TCE	2,031	2,382	2,351
WACC	0.091	0.129	- 0.023
<b>EVA</b>	<b>84.39</b>	<b>118.67</b>	<b>- 27.99</b>

The EVA value is positive in 2018 and 2019, while in 2020 EVA value is negative. It can be interpreted that in 2020, the company's financial performance decreased, so it does not provide value to stakeholders. This performance decreased due to several factors, such as the pandemic, which reduced sales and affected the rupiah exchange rate (weakening the rupiah against foreign currencies).

### 4.5 Company Performance and Business Cycles

The cable industry is one of the critical industries in developing every sector. In Indonesia, this industry still has bright prospects with the construction of a 35,000 MW power plant mega project launched by the Government through the State Electricity Company (PLN) up to 2024. As the only producer of 150 kV high-voltage cable with a size of 2,000 mm<sup>2</sup> in the country, the company is optimistic about achieving better growth in the coming years. Through this description, the decision to choose investment in the cable industry is quite promising. As demand increases, production costs are still part of the company's concern.

As a company with bright prospects, KMI has a vision that is to strengthen the company's position as an advanced, tough, and reliable cable manufacturer. The company's mission, among others, is to provide the best quality products and services to customers, maintain a mutually respectful partnership relationship, empower employees by advancing a professional work culture, increase competitiveness through continuous innovation, and increase company value in the long term.

As a company with bright prospects, KMI has a vision that is to strengthen the company's position as an advanced, tough, and reliable cable manufacturer. The company's mission, among others, is to provide the best quality products and services to customers, maintain a mutually respectful partnership relationship, empower employees by advancing a professional work culture, increase competitiveness through continuous innovation, and increase company value in the long term. The strategic actions taken by KMI include hedging during the assessment stage, searching for new export markets, participating actively in international exhibition activities, bolstering the technical team, revitalizing production equipment, conducting a thorough internal control system, delivering thorough financial reports, and conducting evaluations to develop improvement proposals (www.kmiwire.com 2020).

The business sector experienced extraordinary disruption due to the pandemic in 2020, including KMI. The corporate governance strategy and policies taken by KMI during the pandemic are to maintain cash flow by making efficiency in Human Resources (HR) and operational costs, delaying investment, reducing unit production, expanding the market both the retail market through e-commerce and marketplaces, evaluating the cost structure, accelerating the process of product development and innovation, forming collaborations with producers of cable accessories, implementing strict health protocol standards in companies and plants, scheduling work with alternate Work From Home (WFH) and Work From Office (WFO) shifts, and increasing the use of information technology as a carrying capacity in carrying out work (www.kmiwire.com 2020).

## 5. Results and Discussion

### 5.1 Economic Value Added (EVA)

According to the data processing results, the company was successful in adding value for investors and raising asset value in 2018 and 2019 with a positive EVA value. In contrast, a negative EVA value for 2020 shows that the corporation failed to increase value for investors and decreased asset value by selling assets worth four hundred billion rupiahs.

### 5.2 Key Performance Indicator (KPI)

A negative EVA result indicates a decline in financial performance, although, on the other hand, there are external factors (global pandemic). This is an evaluation for the company to set new financial performance KPIs. Table 6 shows KPIs and strategies from a financial perspective adopted from (Bluszcz & Kijewska 2016) adjusted to the objectives to be achieved by KMI.

Table 6. KPIs and strategies from a financial perspective

Perspective	Goals	KPI	Strategy
Financial	Increase profit	NOPAT	<ul style="list-style-type: none"> <li>- reduce production costs</li> <li>- improve the marketing process</li> <li>- produce according to the Just-in-Time principle</li> <li>- increase sales</li> <li>- expand market share</li> </ul>
	Increase Assets	Indicator TCE	<ul style="list-style-type: none"> <li>- reduced cost of capital</li> <li>- fixed asset turnover</li> </ul>
	Optimization of capital structure	WACC	<ul style="list-style-type: none"> <li>- reduction of capital investment</li> <li>- investment is lower than capital</li> <li>- capital allocation</li> </ul>
	Capital investment	EVA	<ul style="list-style-type: none"> <li>- acquisition</li> <li>- marketing investment</li> <li>- R&amp;D investment</li> </ul>

### 5.3 SWOT Analysis

Figure 5 shows the outcomes of the assessment using a SWOT analysis. The results of the evaluation serve as a description of the company's position and as material for making a new strategy for the company. The formulation of a new strategy using a SWOT analysis approach as a tactical step can be seen in Table 7.



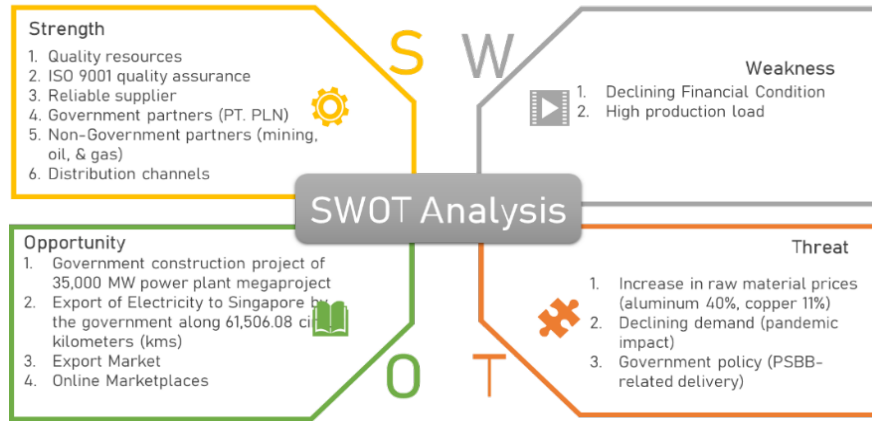


Figure 5. SWOT Analysis

Internally, KMI has both strengths and weaknesses. Owned resources that are a source of strength, like qualified human resources, have an up-to-date quality assurance certificate. One of the reliable suppliers is a subsidiary that supplies steel wire and has its distribution channel with the specific purpose of marketing and selling products. KMI has the power of suppliers and distribution in one supply chain. The biggest consumers of KMI are 70-80% government and 20-30% non-government. However, being the main supplier of the Government must be reviewed regarding the force major (pandemic). The occurrence of this situation where a large percentage of purchases from one consumer can result in a decrease in demand and delays in payments disrupt the capital cycle. Weaknesses faced by KMI related to financial conditions and increased production costs, so the policy of laying off employees was inevitable. The number of workers in 2019 was 1,231 people to 674 people in 2020.

Opportunities and threats are external images for KMI. National and international market opportunities opened by the Government, export markets (mining, oil, & gas) in the non-government sector, and stretching e-commerce and marketplaces are opportunities for KMI to increase profits. Along with the available opportunities, various threats arise for KMI, namely an increase in raw material prices for aluminum by 40% and copper by 11%, becoming a separate burden, declining demand due to the cessation of several government projects, and government policies related to activity restrictions. The SWOT analysis above strengthens the results of the previous EVA calculation, which is negative, which indicates that the company's financial performance is in poor condition.(Table 7)

Table 7. SWOT Matrix

SO Strategy	WO Strategy
<ul style="list-style-type: none"> <li>• Strengthening non-governmental markets by taking part in private project tenders</li> <li>• Expanding its international business by marketing products (river crossing subsea cables)</li> <li>• Strengthening export networks</li> <li>• Penetrate the online market by utilizing effective technology to reach diverse markets</li> <li>• Strengthening R&amp;D teams for innovation</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation and formulation of new KPIs</li> <li>• Targeting power generation mega projects</li> <li>• Export of electric cable to Singapore</li> <li>• Opening up new export markets with an alliance strategy</li> <li>• Reaching a wide market through e-commerce</li> </ul>
ST Strategy	WT Strategy
<ul style="list-style-type: none"> <li>• Maximize your marketing line</li> <li>• Conduct mass production to reduce costs</li> <li>• Strengthening the distribution network</li> <li>• Prioritizing quality as a tool of competitiveness</li> <li>• Maintain competitive price levels (don't decrease prices)</li> </ul>	<ul style="list-style-type: none"> <li>• Producing cables with the system by order for high voltage</li> <li>• Mass production for low-voltage cables with eastern Indonesia's target market</li> <li>• Reduce production costs with efficiency in every production line</li> <li>• Promoting at the national level</li> <li>• Managing effective CSR as an indirect promotion tool</li> </ul>

## 5.4 Recommendation

The company's steps in determining KPIs from a financial perspective can use the EVA method because this method has a complete performance measure, is easy to do, overcomes short-term problems, and provides investment decision considerations for companies and investors. Strategy formulation with SWOT analysis provides alternative solutions for tactical decisions related to strategy.

Several strategies that can be considered in this research are strengthening the private market by increasing tenders, expanding national and international business by using effective technology through online markets, reducing production costs by mass production of low-voltage cable types with industrial market coverage and housing, maintaining quality and competitive prices, so that good profit margins are obtained, strengthening distribution and marketing networks by conducting joint ventures for selling products in both national and international markets, strengthening the R&D team by involving universities in product innovation and managing CSR effectively so that the company automatically builds value through research activities and social actions involving educational institutions.

## 6. Conclusion

Measurement of financial performance using EVA can be one solution in determining policies on capital management so that a positive margin is obtained from the capital used. The KPIs and strategic steps described above can be applied as tactical steps for the company. Performing internal and external analysis using the SWOT analysis method can be a solution to translate the best tactical strategies for the company to increase profits.

The limitation of this research is that the literature and data are obtained only from internet sources. Further research, if possible, can be done using data on the actual condition of the company. So that more accurate data and analysis are obtained.

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## References

- Bluszcz, A., & Kijewska, A., Factors Creating Economic Value Added of Mining Company, *Archives of Mining Sciences*, vol. 61, no. 1, pp. 109–123, 2016.
- David Parmenter, *Key performance indicators : Developing, Implementing, and Using Winning KPIs*, John Wiley & Sons Inc., 2007.
- Grant, J. L., *The Eva Revolution*, [www.wiley.com](http://www.wiley.com), 2003.
- Helms, M. M., & Nixon, J., Exploring SWOT analysis – where are we now?: A review of academic research from the last decade, In *Journal of Strategy and Management*, vol. 3, no. 3, 2010.
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E., The Management Of Strategy: Concepts and Cases, In *Nelson Education Ltd.*, 2007.
- Istiqomah, S., Sutopo, W., & Astuti, R. W., Lesson learned of business strategy for commercializing an e-motor cycle technology: A comparative study, *Proceedings of the International Conference on Industrial Engineering and Operations Management*, pp. 969–978, August, 2020.
- Kaluzhskikh, I. A., The mechanism of distinguishing key factors of nonpublic corporation value based on differentiation methods, *Review of European Studies*, vol. 7, no.7, pp. 262–276, 2015.
- Kawuri, A. L., Sutopo, W., Hisjam, M., & Istiqomah, S., Lesson Learned in Developing and Implementation a Global Business Strategy in Agriculture Companies: A Comparative Study, *Proceedings of the International Conference on Industrial Engineering and Operations Management Istanbul, Turkey*, 3072–3078, 2022.
- Lupita, A., Yuniaristanto, Sutopo, W., & Rasli, A. M., SWOT and IFE-IFE approach for developing spin-offs university strategy: A case study, *Advanced Science Letters*, vol. 23, no. 9, pp. 8675–8682, 2017.
- Mäkeläinen, E., *Economic Value Added as A Management Tool*. Universitas Oeconomica Helsingiensis, 1998.
- Malichova, E., Durisova, M., & Tokarcikova, E., Models of Application Economic Value Added in Automotive Company, *Transport Problems*, vol. 12, no. 3, pp. 93–102, 2017
- MarketNews.id., *PT KMI Wire and Cable Tbk Rugi Rp 90,66 Miliar di Kuartal III 2020*, MarketNews.Id, Accessed on April 18, 2022.

- McLaren, J., Implementing the EVA Business Philosophy: Management Accounting Evidence from New Zealand. *CIMA*, 2005.
- Meutia Dewi, Penilaian Kinerja Keuangan Perusahaan dengan Menggunakan Metode EVA (Economic Value Added) (Studi Kasus pada PT. Krakatau Steel Tbk Periode 2012-2016), *Jurnal Manajemen Dan Keuangan Unsam*, vol. 6, no.1, pp. 648–659, 2017.
- Oh, S., Hong, A., & Hwang, J., An analysis of CSR on firm financial performance in stakeholder perspectives, *Sustainability (Switzerland)*, vol. 9, no. 1023, pp. 1–12, 2017.
- Pacific Crest, Applying Key Performance Indicators to Build Your Business. *Pacific Crest Group*, vol. 415, pp. 1–24, 2012.
- Pratama, A. Z., Sutopo, W., Hisjam, M., & Istiqomah, S., Comparative Study of Global Business Strategy : Lessons Learned from Excellent Sports-wear Companies ( Nike and Adidas ), *Proceedings of the International Conference on Industrial Engineering and Operations Management Istanbul, Turkey*, 3062–3071, 2022.
- Pratiwi, A., Sutopo, W., Zakaria, R., & Rasli, A. M., Formulating strategy through QSPM based on SWOT framework: A case study spin-off company in Malaysia. *Advanced Science Letters*, vol. 23, no. 9, pp. 8646–8651, 2017.
- Rahmania, A. D., Sutopo, W., Hisjam, M., & Istiqomah, S., Lesson Learned a Global Business Strategy in Electronic Book Reader : A Comparative Study, *Proceedings of the International Conference on Industrial Engineering and Operations Management Istanbul, Turkey*, 3091–3101, 2022.
- Rattanachai, A., Wasusri, T., Srilaong, V., Tanprasert, K., & Kanlayanarat, S., Key Performance Indicators in Baby Corn Supply Chain in Thailand, *Acta Horticulturae*, vol. 875, pp. 463–468, 2010.
- Ross, I., The Stern Stewart Performance 1000, *Journal of Applied Corporate Finance*, vol. 11, no. 4, pp. 121–127, 1999.
- Sammut-Bonnici, T., & Galea, D., SWOT Analysis. *Wiley Encyclopedia of Management*, 2014.
- Sharma, A. K., & Kumar, S., Economic Value Added (EVA) - Literature Review and Relevant Issues, *International Journal of Economics and Finance*, vol. 2, no. 2, pp. 200–220, 2010.
- Srikandi, D., Sutopo, W., Hisjam, M., & Istiqomah, S., Commercializing a Technology Use Global Business Strategy Approach : A Lesson Learned from HVAC Companies, *Proceedings of the International Conference on Industrial Engineering and Operations Management Istanbul, Turkey*, 3079–3090, 2022.
- Victoria, S., Guideline 3: Key Performance Indicators, *Public Record Office Victoria*, pp. 1–44, 2010.
- www.kmiwire.com, *Annual Report 2020 PT KMI Wire and Cable Tbk*, www.kmiwire.com, Accessed on April 20, 2022.
- Yang, C. L., & Lai, J. H., Influence of Cross-Listing on the Relationship between Financial Leverage and R&D investment: A Sustainable Development Strategy, *Sustainability (Switzerland)*, vo. 13, no. 10341, 2021.

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