

## Leverage Risk Analysis on Financial Performance PT. Angkasa Pura I (Persero) and PT. Angkasa Pura II (Persero)

Ahmad Rahbani Sulaiman Sirait<sup>1\*</sup>  
Dewi Pebriyani<sup>2</sup>  
Intan Nurbaiti Fawziah<sup>3</sup>

<sup>1,2,3</sup>Accounting Department, Faculty of Economics and Business, Padang State University, Indonesia

### Abstract

The COVID-19 pandemic has significantly impacted financial stability across industries, including the aviation sector. PT Angkasa Pura I (Persero) and PT Angkasa Pura II (Persero) have faced increased debt levels, necessitating an analysis of leverage risk in their financial performance. This study aims to assess the companies' leverage conditions and identify potential risk mitigation strategies using Debt to Asset Ratio (DAR) and Debt to Equity Ratio (DER) as analytical tools. A qualitative descriptive approach is employed, utilizing secondary data from 2017 to 2020. The analysis focuses on examining financial reports and relevant literature to understand the extent of leverage risk and its implications. The findings indicate that both companies exhibit high debt levels, placing them in an unhealthy financial state. This condition could lead to financial distress, limiting operational flexibility and increasing vulnerability to external economic shocks. Furthermore, the results suggest that excessive leverage poses significant risks, making it difficult for the companies to secure further funding from creditors or attract potential investors. To mitigate this issue, it is recommended that PT Angkasa Pura I and PT Angkasa Pura II explore alternative financial sources, such as increased equity financing through shareholders and investors or issuing new shares. Additionally, restructuring existing debt and optimizing cost management strategies could help improve financial resilience. This study highlights the critical need for effective debt management strategies to enhance financial sustainability and investor confidence. The insights from this research contribute to the broader understanding of leverage risk management in the aviation sector, especially in times of economic downturns and global crises.

**Keywords:** Debt to Asset Ratio, Debt to Equity Ratio, financial performance, leverage risk, COVID-19 impact

### 1. INTRODUCTION

The Covid-19 pandemic has impacted the global economy, especially in the field of commercial aviation, as well as the company's operations and finances. The covid-19 outbreak also put a lot of pressure on the Indonesian economy in 2020, and brought turbulence and new ways of working. Health, humanitarian and economic issues were felt

---

<sup>1</sup>\*Corresponding author, email: bani@unp.ac.id

**Citation in APA style:** Sirait, A.R.S., Pebriyani, D., Fawziah, I.N. (2025). Leverage Risk Analysis on Financial Performance PT. Angkasa Pura I (Persero) and PT. Angkasa Pura II (Persero). *JOSAR*, Vol. 10. No. (1):156-166.

**Received:**  
February, 10<sup>th</sup> 2025

**Revised:**  
February, 27<sup>th</sup> 2025

**Published:**  
March, 30<sup>th</sup> 2025

in all parts of the world during the Covid-19 pandemic. To combat Covid-19, policies have been implemented that limit the mobility of people and the movement of products and services. Consumption, investment, transportation, tourism, production, and the confidence of economic actors have declined dramatically, resulting in a sharp decline in economic growth.

For companies with significant levels of debt at the start of the pandemic, the Covid-19 problem has become even worse. The combined effect of high corporate debt levels at the start of the pandemic and declining profitability during 2020 may have resulted in a drastic decline in growth during the Covid-19 pandemic crisis. The debt-flow bottleneck associated with the Covid-19 pandemic has the potential to have a greater economic impact than we saw during the Great Recession. Large debt burdens, also known as debt arrears, may make it difficult for firms to borrow more money to support desired work projects (Makiwan, 2018). Scattered corporate debt holdings may have increased the cost of debt during the downturn due to the Covid-19 pandemic.

The use of high debt of course also has a fairly high risk, if the company is unable to pay its obligations, the company will lose trust for creditors, debtors, suppliers and the public (Kasmir, 2019). And the company is considered failed so that if the debt is high enough but not balanced with large income, the company has a risk of bankruptcy.

The following is the debt of aviation sub-sector companies on the IDX.

**Table. 1** Debt Report in USD

Tahun	PT.Angkasa Pura I	PT.Angkasa Pura II
2017	11.331.179.736	10.613.825.618.217
2018	16.556.690.952	14.903.829.682.017
2019	26.806.043.252	19.555.221.483.052
2020	29.220.810.600	23.118.358.314.131

Source: [www.idx.co.id](http://www.idx.co.id)

An analysis of financial ratios makes it possible to determine the degree of a company's financial performance. Liquidity ratios, solvency ratios, activity ratios and profitability ratios are typically used to analyze financial ratios and assess the financial performance of a company (Agustina & Suprayitno, 2020).

The Debt to Equity Ratio (DER) is a fundamental financial metric used to assess a company's debt policy, calculated by dividing total debt by total equity. This ratio reflects a company's ability to meet its financial obligations by utilizing a portion of its own equity to repay debts. A lower DER indicates a stronger financial position, suggesting that the company has a healthier capital structure with a lower financial risk (Brigham & Houston, 2021). Conversely, a higher DER implies greater reliance on debt financing, which, while potentially enhancing returns, also increases financial risk and the burden of interest payments (Myers, 2020).

Another critical leverage ratio, the Debt to Asset Ratio (DAR), provides insight into the extent to which a company's assets are financed by debt. A rising DAR suggests that the company is in a precarious financial position, as a higher ratio indicates greater dependence on external financing. This can heighten financial risk and potentially impact the company's long-term stability (Titman & Wessels, 1988). On the other hand, a lower DAR signifies that a company has a more conservative capital structure, reducing financial risk and exposure to debt obligations (Frank & Goyal, 2009). However, a high or low DAR does not always directly influence stock prices. A company with a high DAR

does not necessarily experience a decline in stock value, just as a company with a low DAR does not always see an increase in stock value (Sofiyana, 2021).

The capital structure theory introduced by Modigliani and Miller (1958) argues that, under ideal market conditions, a firm's choice between debt and equity financing does not impact its overall value. However, in reality, corporate financing decisions are shaped by factors such as tax considerations, bankruptcy risks, and debt costs. Harris and Raviv (1991) further highlight that companies tend to seek an optimal capital structure that balances financial risk and firm value. Striking this balance is crucial for management to ensure that leverage is used effectively without exposing the company to excessive financial vulnerability.

Ross, Westerfield, and Jaffe (2019) emphasize that while leverage can serve as a powerful tool for enhancing return on equity (ROE), excessive dependence on debt financing can significantly increase financial instability. Proper debt management requires a strategic approach that aligns with the company's long-term financial goals and growth potential. Businesses must carefully evaluate their leverage policies to maintain financial flexibility and ensure sustainable performance.

Based on the issues highlighted in this study, the research seeks to answer the following question is How does leverage risk influence the assessment of financial performance at PT Angkasa Pura I (Persero) and PT Angkasa Pura II (Persero)?

By integrating established financial theories with empirical insights, this research aims to provide valuable contributions to the understanding of corporate leverage strategies. A well-balanced leverage approach can enable businesses to optimize financial performance while mitigating the risks associated with excessive debt reliance. Ultimately, these insights can serve as a practical guide for financial decision-making, equipping companies with the tools to navigate the complexities of corporate financing more effectively.

## 2. LITERATURE REVIEW

### 2.1 Signal Theory

Based on Signaling Theory, firms with promising future prospects tend to opt for higher levels of debt financing as a strategic signal of their confidence in generating sufficient earnings to meet debt obligations (Tahir et al., 2020). Empirical evidence underscores that leverage is not merely a financing decision but also a deliberate signaling mechanism used by firms to convey their financial soundness to the market. Consequently, leverage affects not only investor perceptions but also directly influences financial performance (Aregbesola et al., 2024). In this regard, the relationship between leverage and firm performance is non-linear—while optimal leverage can enhance financial outcomes, excessive leverage may trigger financial distress and deteriorate organizational performance.

Moreover, the analysis of leverage-related risks cannot be disentangled from the liquidity dimension. Effective liquidity risk management, when synergized with an optimal leverage structure, has been empirically shown to improve profitability, as reflected in indicators such as Return on Equity (ROE) (Aregbesola et al., 2024). Conversely, high debt levels unaccompanied by adequate liquidity control can lead to substantial interest burdens and financial instability, ultimately suppressing profitability.

It is also crucial to recognize that leverage does not function in isolation but is significantly influenced by the broader macroeconomic context. External economic

fluctuations may either amplify or mitigate the impact of leverage on a firm's operational effectiveness (Artikis & Nifora, 2011). In this light, Signaling Theory serves as a critical tool for firms in navigating their leverage strategies in response to changing economic conditions.

Within this context, information assumes a pivotal role as a signal used by investors to make informed decisions (Ghozali, 2020). Such signals comprise corporate actions that reflect managerial perspectives on the firm's future trajectory and their efforts to align with the expectations of capital providers. Given the inherent information asymmetry between managers and shareholders, Signaling Theory provides a theoretical foundation to explain how disclosures regarding financial activities and policies—including leverage—become crucial in influencing external decision-making (Narandika et al., 2016).

Firms are also frequently confronted with fixed obligations in their commercial operations, which inherently involve risks. In these circumstances, management must recognize that leverage—particularly when fixed costs yield higher marginal benefits—can be a strategic maneuver. Large firms, in general, enjoy greater trust from creditors due to their reputational strength and operational scale, which facilitates access to additional resources that can enhance firm value (Dewantari, 2019).

In sum, a leverage risk analysis grounded in Signaling Theory provides a nuanced understanding of how both conservative and aggressive leverage strategies can serve as reflections of firm quality and have direct implications for financial performance. This perspective is valuable for financial managers and investors alike in optimizing capital structure while maintaining long-term financial stability.

The term Leverage refers to the ability of a company to use fixed assets or money (fixed assets or funds) to increase the level of income (return) for the company's shareholders. The leverage ratio is a calculation that compares the amount of money contributed by the owner with the amount borrowed from creditors (Makiwan, 2018). This ratio reflects the company's ability to meet short-term and long-term financial commitments.

## 2.2 Debt to Asset Ratio (DAR)

Debt to Asset Ratio (DAR) is a fundamental financial metric that quantifies the proportion of a company's total liabilities relative to its total assets.

This ratio serves as a critical indicator of how much of a company's assets are financed through debt as opposed to equity, making it an essential component of solvency analysis. A high DAR suggests a heavy reliance on debt financing, which can amplify financial risk, particularly in periods of economic downturn or declining revenue. In contrast, a low DAR indicates limited dependence on external borrowing, suggesting a more conservative and potentially stable financial structure (T. & Utami, 2023; Rosi & Hasanuh, 2020; Andhani, 2019).

In corporate financial reporting, DAR functions as a key evaluative tool for assessing a firm's long-term financial stability. Investors and creditors use this ratio to evaluate the company's capacity to meet its obligations using its asset base (Eriots et al., 2007). From an investment perspective, the DAR offers insights into the company's capital structure, debt management policies, and financial resilience.

Empirical studies have established that DAR significantly affects firm performance indicators such as Return on Assets (ROA), with implications for profitability and investment potential (Kamal, 2017; Sunaryo & Lestari, 2021). A lower

DAR is typically associated with a healthier balance sheet, indicating a reduced financial burden and an enhanced ability to generate sustained earnings and long-term growth (Supardi et al., 2018). Conversely, a higher DAR may signal elevated financial risk and potential liquidity challenges, deterring investor confidence and limiting access to future credit (Hasna, 2019; Rosi & Hasanuh, 2020).

From a strategic standpoint, the DAR is not only reflective of internal financial management practices but also a comparative benchmark across industries. According to Cashmere (2019), understanding the average debt ratios within a specific sector is essential for contextualizing a company's performance. A firm with a DAR significantly above the industry norm may be perceived as over-leveraged, potentially facing difficulties in meeting debt obligations and securing additional funding. On the other hand, firms with DARs below the sector average are generally viewed as having a stronger financial footing due to lower reliance on borrowed capital. According to (Cashmere, 2019) the debt to asset ratio was developed, the formula used is as follows:

$$\text{Debt to Asset Ratio} = \frac{\text{Total debt}}{\text{Total asset}}$$

### 2.3 Debt to Aequity Ratio

Leverage is a measure of the amount of debt compared to equity (Kasmir, 2019). Total liabilities, including current liabilities, are compared to total equity using this ratio. The Debt to Equity Ratio (DER) is a financial metric used to assess the proportion of a company's total debt relative to its total equity. This ratio reflects the company's capital structure and indicates how reliant the company is on debt to finance its assets. A high ratio suggests that the company has more debt than equity, which often increases the risk of bankruptcy. Conversely, a low ratio indicates less reliance on debt for financing operations (Sari & Anwar, 2023; Budi et al., 2024; Nurhikmawaty et al., 2020). Therefore, DER is a crucial tool in financial analysis, helping to understand a company's capital composition and the potential financial risks it faces (Zeitun & Tian, 2014; Gautam & Bangshi, 2024). In the context of capital structure, DER serves as a valuable indicator for investors and analysts to gauge how a company manages its financing and the associated risks with debt. Research shows that companies with a high DER often face pressure to generate enough earnings to cover interest payments, which can, in turn, affect profitability (Nurhikmawaty et al., 2020; Dahal et al., 2024). On the other hand, a more cautious use of debt, reflected by a lower DER, can signify financial stability, potentially enhancing the company's market value (Uzliawati et al., 2018; Hermawan, 2023).

Moreover, DER has significant implications for management decisions, especially concerning investment and financing strategies. Financial managers must carefully consider the use of debt in relation to risk and its impact on return on equity (ROE) (Sunnyo & Lestari, 2021). This is because an increase in DER is often associated with reduced profitability (Shah, 2022; Maulita & Tania, 2018). Therefore, management must conduct thorough analysis to balance the need for funding to support company growth with the inherent risks of high debt levels (Hermawan, 2023; Blouin et al., 2014). As a result, using DER as an indicator in financial reports is essential for investors to assess the financial health and future performance potential of a company (Almurni & Azhar, 2019; Rusnaeni, 2018).

For creditors, such as banks, the higher the DER, the lower the profitability, as this indicates a greater likelihood of bankruptcy (Pranjoto, 2013). However, for

businesses, a lower DER means higher equity funding by the owners and better protection for creditors in case of a loss or asset value decline, providing a safeguard against financial distress. Then the formula used is as follows:

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

The leverage ratio standard is used to determine whether the company being examined is in good (normal) or unhealthy (unhealthy) condition. so that it can minimize the risk of large debts so that the company does not go bankrupt and default. The following is the standard leverage ratio:

**Table 2. Leverage Ratio Standards**

No	Leverage Ratio	Standar Ratio
1	DAR	35 %
2	DER	90 %

Source : Kasmir (2019:166)

### 3. METHODS

This research uses a qualitative descriptive approach, which aims to find problems, develop phenomena in detail, and analyze data to explain these problems (Creswell, 2015). This research uses second-level data or secondary data, in the form of ready-made data (Sekaran & Bougie, 2016). Secondary data comes from documentation or records in the form of published government reports, companies, the internet, industry analysis or information conducted by the media, and so on.

This survey was conducted at Angkasa Pura I (Persero) and Angkasa Pura II (Persero) using time series data from 2017 to 2020 through the website <https://idx.co.id>.

### 4. RESULTS AND DISCUSSION

Setting a good ratio certainly brings many benefits to the company in the face of any future opportunities, but all these guidelines depend on the overall goals of the company. Leverage analysis is very important to do, namely as:

1. Knowing the company's position on its obligations to all other parties, such as investors and creditors.
2. As an assessment of the company's ability to achieve firm commitments to installments, including interest.
3. As a measure of how much the company's assets are covered by liabilities
4. Evaluate how the company's liabilities affect the management of the company's assets.
5. Evaluate and measure some part of each rupiah of equity used as collateral for the company's long-term debt.

Leverage analysis can conclude that a company can find out several things related to the use of shares and liabilities and determine the ratio of its ability to fulfill its obligations. Financial managers can then take steps to minimize the risks that arise, especially those related to corporate debt.

### **a. Leverage in terms of DAR**

From the research results found DAR data on PT Angkasa Pura I (Persero) and PT Angkasa Pura II (Persero), as follows:

**Table 3.** Debt to Asset Ratio (DAR) PT.Angkasa Pura I (Persero) and PT.Angkasa Pura II (Persero)

<b>Tahun</b>	<b>Standar Rasio</b>	<b>PT. Angkasa Pura I</b>	<b>PT. Angkasa Pura II</b>
2017	35%	45,8%	32,5%
2018	35%	52,4%	38,7%
2019	35%	62,7%	44,4%
2020	35%	68,6%	52,02%

Source: [www.idx.co.id](http://www.idx.co.id)

Study findings based on the calculation of the ratio of liabilities to assets (DAR) of the company, namely the Angkasa Pura I Company in the 2017 period of 45.8% (unhealthy) while the Angkasa Pura II Company in the 2017 period amounted to 32.5% (healthy). This means that every one hundred percent of Angkasa Pura I company finances, amounting to 45.8% and Angkasa Pura II companies 32.5% are financed by debt.

In the 2018 period for the Angkasa Pura I company amounted to 52.4% (unhealthy) while for the Angkasa Pura II company it was 38.7% (unhealthy). This means that every one hundred percent of Angkasa Pura I company finances, amounting to 52.4% and Angkasa Pura II companies 38.7% are financed by debt. DAR in this period increased in the Angkasa Pura I company by 6.6% and the Angkasa Pura II company by 6.2% due to an increase in overall liabilities, where the increase in total assets did not continue.

Whereas in the 2019 period for the Angkasa Pura I company it was 62.7% (Unhealthy) while for the Angkasa Pura II company it was 44.4% (Unhealthy). This means that every one hundred percent of the Angkasa Pura I company's finances, amounting to 62.7% and the Angkasa Pura II company is 44.4% financed by debt. The Debt to Asset Ratio in this period increased in the Angkasa Pura I company by 10.3% and the Angkasa Pura II company by 5.7% due to an increase in overall liabilities, where the increase in total assets did not continue.

And in the 2020 period for the Angkasa Pura I company amounted to 68.6% (Unhealthy) while for the Angkasa Pura II company it was 52.02% (Unhealthy). This means that every one hundred percent of the Angkasa Pura I company's finances, amounting to 68.6% and the Angkasa Pura II company 52.02% are financed by debt. Debt to Asset Ratio in this period increased in Angkasa Pura I company by 5.9% and Angkasa Pura II company by 7.8% due to an increase in overall liabilities, where the increase in total assets did not continue.

In line with previous research conducted by Viera G. Margaretha et al (2019) found that the Debt to Asset Ratio (DAR) at PT Ace Hardware Indonesia Tbk from 2018 can be said to be quite good, meaning that the company is able to pay all its debts which are offset by an increase in its assets. Further research conducted by Shintia (2017) found that the Debt Asset Ratio (DAR) at Bank Rakyat Indonesia has increased from 2015, so that company management must minimize the risk of existing leverage so that the company does not default on its long-term debt. In addition, research conducted by Sofyana (2021) states that the DAR results of CV Makmur are in a good category, meaning that the company is able to pay all its debts.

Because the company exceeds the predetermined criteria, the company will experience difficulties in paying off its obligations with the assets it has purchased. The company must make stock efforts by increasing assets obtained from the number of shareholders (shareholders), issuing bonds or forms of securities, or by selling them to the public, so that the company is able to pay its debts with assets in the following year, and if the company is liquidated, the assets that the company already has can still be used to cover the company's losses.

#### **b. Leverage in terms of DER**

From the research results, it was found that the amount of Debt to Equity Ratio (DER) of PT.Angkasa Pura I and PT.Angkasa Pura II, as follows:

**Table 4.** Debt to Equity Ratio (DER) PT. Angkasa Pura I (Persero) and PT. Angkasa Pura II (Persero)

Tahun	Standar Rasio	PT.Angkasa Pura I	PT.Angkasa Pura II
2017	90%	84,5%	48,1%
2018	90%	109,9%	63,1%
2019	90%	167,7%	80%
2020	90%	218,7%	108,4%

Source: [www.idx.co.id](http://www.idx.co.id)

In 2017 it was found that the Debt to Equity Ratio (DER) of PT.Angkasa Pura I was 84.5% (healthy) and PT.Angkasa Pura II was 48.1% (healthy), meaning that for every one hundred rupiah provided by shareholders and corporations financed by debt of 84.5% at the company PT.Angkasa Pura I and 48.1% at the company PT.Angkasa Pura II. shows that the debt due to the company is smaller than the total capital of the company, so the company can still pay off its obligations / liabilities. In 2018 it was found that the Debt to Equity Ratio (DER) of PT. Angkasa Pura I amounted to 109.9% (unhealthy) and PT.Angkasa Pura II amounted to 63.10% (healthy), meaning that for every one hundred rupiah provided by shareholders (shareholders) and corporations paid by debt of 109.9% at the company PT.Angkasa Pura I and 63.10% at the company PT.Angkasa Pura II shows that the debt at PT.Angkasa Pura I is greater than the total capital, but has a debt at PT.Angkasa Pura II smaller than the total capital of the company, so in this condition the company PT.Angkasa Pura II can still pay off debts / liabilities.

In 2019 it was found that the Debt to Equity Ratio (DER) of PT.Angkasa Pura I was 167.7% (unhealthy) and PT.Angkasa Pura II was 80% (healthy), meaning that for every one hundred rupiah provided by shareholders (shareholders) and corporations paid by debt of 167.7% at the company PT.Angkasa Pura I and 80% at the company PT. Angkasa Pura II. shows that the debt at PT.Angkasa Pura I is greater than all the equity owned while at the PT.Angkasa Pura II company is smaller than all the equity owned by the company, so that in this condition the PT.Angkasa Pura II company can still pay off debts / obligations.

Meanwhile, in 2020 it was found that the Debt to Equity Ratio (DER) of PT.Angkasa Pura I was 218.7% (unhealthy) and PT.Angkasa Pura II was 108.4% (unhealthy), meaning that for every one hundred rupiah provided by shareholders and corporations financed by debt of 218.7% at the company PT.Angkasa Pura I and 108.4% at the company PT.Angkasa Pura II. shows that the company's debt is greater than all of its equity, so that in this condition the companies PT.Angkasa Pura I and PT.Angkasa Pura II have not been able to pay off debts / obligations.

So it can be concluded that PT Angkasa Pura I from 2018 to 2020 is experiencing a bad condition. From 2017-2018 it increased by 25.4%, in 2018-2019 it increased by 57.8%, and in 2019-2020 it increased by 51%.

And at PT Angkasa Pura II in 2017-2019 it can be said to be in the good category, but in 2020 there was an increase of 28.4% from the previous year so that the company was in a bad state.

Consistent with previous work by Viera G. Margaretha et al. (2019) Knowing the debt-capital ratio (DER) at PT Ace Hardware Indonesia Tbk 2018 is very good. This means that the company is able to pay off all its debts, which are offset by shares. According to a subsequent survey by Shintia (2017), the debt equity ratio (DER) at Bank Rakyat Indonesia fluctuates so that it is difficult to predict the risks that occur, so the company management must minimize the risk of existing leverage. Meanwhile, after an investigation by Sofyana (2021) said that the DER results from CV Makmur had increased, meaning that the higher the DAR, the better the company so that it could minimize risk.

Since the threshold has been set, it will be difficult for the corporation to fulfill its debt using its equity. The corporation should endeavor to increase the number of shares of the company that can be raised from shareholders (shareholders) and through public funding to enable the company to fulfill its obligations in the next year's shares.

## 5. CONCLUSION AND SUGGESTION

### 5.1 CONCLUSION

PT Angkasa Pura I and PT Angkasa Pura II companies have a high level of debt so that the company will have a high risk as well, this will certainly cause a lot of debt financing so that the company will find it difficult to find loans because the creditors are afraid that the company will not be able to pay the debt because of the high risk owned by the company. Meanwhile, from the investor side, they will not want to invest their funds in parties or companies that are in financial difficulties coupled with the company experiencing a decrease in revenue during the Covid-19 pandemic which makes matters worse. Therefore, the company management must be able to manage risks and anticipate future risks that arise due to a lot of debt so that there is no default.

### 5.2 SUGGESTIONS

- a) Based on the research, discussion, and conclusions that the researchers have described earlier, the following suggestions can be proposed. PT Angkasa Pura I (Persero) and PT Angkasa Pura II (Persero) are expected to further improve the company's performance by managing existing risks, and due to the company's leverage, the use of high debt and the company's large operational costs. debt. By increasing the burden on the company and instead using low debt, the risk of default and bankruptcy of the company can be minimized and investors will be interested in investing in the company.
- b) Future researchers are expected to further develop this research by using a broader research topic. Researchers are also expected to test other risks such as liquidity, bankruptcy risk, and the risk of falling stock prices.

## REFERENCES

Agustina, Y. N., & Suprayitno, H. (2020). Analysis of financial statements using liquidity ratio to measure financial performance in 2017-2019 (PT. Mayora Indah Tbk). *Jurnal JOSAR (Journal of Students Academic Research)*, 5(2), 32-39.

Amri, A. (2021). Analisis leverage dalam mengukur risiko studi kasus pada PT. Pabrik Kertas Tjiwi Kimia Tbk. *Jurnal Ilmu Sosial, Manajemen, Akuntansi, & Bisnis*, 2(1), 1–13.

Andhani, D. (2019). Pengaruh debt to total asset ratio (DAR) dan debt to equity ratio (DER) terhadap net profit margin (NPM) serta dampaknya terhadap harga saham pada perusahaan elektronik di Bursa Efek Tokyo tahun 2007-2016. *Jurnal Sekuritas (Saham Ekonomi Keuangan Dan Investasi)*, 3(1), 45. <https://doi.org/10.32493/skt.v3i1.3262>

Aregbesola, O., Wright, O., Kolawole, I., & Omojola, S. (2024). Impact of liquidity risk and leverage on the financial performance of Nigerian deposit money banks. *Journal of Economics Finance and Management Studies*, 7(8). <https://doi.org/10.47191/jefms/v7-i8-10>

Artikis, P., & Nifora, G. (2011). Capital structure, macroeconomic variables & stock returns. Evidence from Greece. *International Advances in Economic Research*, 18(1), 87-101. <https://doi.org/10.1007/s11294-011-9334-z>

Brigham, E. F., & Houston, J. F. (2021). *Fundamentals of financial management* (16th ed.). Cengage Learning.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67. <https://doi.org/10.1177/0149206310388419>

Creswell, J. W. (2015). *Riset perencanaan, dan evaluasi riset kualitatif dan kuantitatif*. Pustaka Pelajar.

Dewantari, N. L. S., Cipta, W., & Susila, G. P. A. J. (2019). Pengaruh ukuran perusahaan dan leverage serta profitabilitas terhadap nilai perusahaan pada perusahaan food and beverages di BEI. *Jurnal PROSPEK*, 1(2), 74–83.

Eriotis, N., Vasiliou, D., & Ventoura-Neokosmidi, Z. (2007). How firm characteristics affect capital structure: An empirical study. *Managerial Finance*, 33(5), 321-331. <https://doi.org/10.1108/03074350710739605>

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important? *Financial Management*, 38(1), 1–37. <https://doi.org/10.1111/j.1755-053X.2009.01026.x>

Ghozali, I. (2020). *25 Grand Theory: 25 teori besar ilmu manajemen, akuntansi dan bisnis* (1st ed.). Yoga Pratama.

Goranova, M., Alessandri, T. M., Brandes, P., & Dharwadkar, R. (2007). Managerial ownership and corporate diversification: A longitudinal view. *Strategic Management Journal*, 28(3), 211–225. <https://doi.org/10.1002/smj.575>

Harris, M., & Raviv, A. (1991). The theory of capital structure. *The Journal of Finance*, 46(1), 297–355. <https://doi.org/10.1111/j.1540-6261.1991.tb03753.x>

Kamal, M. (2017). Pengaruh receivable turn over dan debt to asset ratio (DAR) terhadap return on asset (ROA) pada perusahaan pertanian yang terdaftar di Bursa Efek Indonesia (BEI). *Jurnal Ilmiah Manajemen Dan Bisnis*, 17(2), 68-81. <https://doi.org/10.30596/jimb.v17i2.996>

Kasmir. (2019). *Analisis laporan keuangan*. PT Rajagrafindo Persada.

Kholisoh, S., & Dwiarti, R. (2020). The analysis of fundamental variables and macroeconomic variables in predicting financial distress. *Management Analysis Journal*, 9(1), 81-90. <https://doi.org/10.15294/maj.v9i1.36395>

Lamichhane, P. (2019). Efficiency of working capital management and profitability: Evidence from manufacturing firms of Nepal. *Management Dynamics*, 22(2), 21-34. <https://doi.org/10.3126/MD.v22i2.30236>

Margaretha, V. G., Manoppo, W. S., & Pelleng, F. A. (2021). Analisis laporan keuangan untuk mengukur kinerja keuangan PT. ACE Hardware Indonesia Tbk. *Productivity*, 2(2), 169-175.

Makiwan, G. (2018). Analisis rasio leverage untuk memprediksi pertumbuhan laba perusahaan manufaktur sub sektor makanan dan minuman yang terdaftar di Bursa Efek Indonesia periode 2011-2015. *Jurnal Bisnis, Manajemen, dan Informatika*, 15(2), 147-172.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance, and the theory of investment. *The American Economic Review*, 48(3), 261-297. <https://www.jstor.org/stable/1809766>

Myers, S. C. (2020). Capital structure puzzle: Revisited. *Journal of Financial Economics*, 135(1), 125-140. <https://doi.org/10.1016/j.jfineco.2019.08.011>

Narandika, H. M., Sanusi, F., & Utami, I. (2016). Pengaruh rasio profitabilitas dan rasio leverage terhadap peringkat obligasi (studi empiris pada perusahaan sub sektor perbankan yang terdaftar di Bursa Efek Indonesia periode 2010-2015). *Jurnal Manajemen dan Bisnis*, 9(1), 40-58.

Pranjoto, G. H. (2013). Analisis leverage (studi kasus pada perusahaan terdaftar di Bursa Efek Indonesia yang melakukan akuisisi). *Jurnal NeO-Bis*, 7(1), 1-14.

Rahmawati, R., Suharti, T., & Supramono. (2019). Analisis leverage untuk mengetahui risiko keuangan dan bisnis pada perusahaan ritel. *Jurnal Ilmu Manajemen*, 2(3), 259-268.

Ross, S. A., Westerfield, R. W., & Jaffe, J. (2019). *Corporate finance* (12th ed.). McGraw-Hill Education.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach* (7th ed.). Wiley.

Sofiyana, N. S. (2021). Analisis rasio leverage pada CV Sumber Makmur periode 2017-2020. *Jurnal Bisnis, Manajemen & Ekonomi*, 19(1), 339-350.

Su, L., Peng, J., Tan, W., & Cheung, Y. L. (2014). Corporate social responsibility and corporate bond pricing—Evidence from China. *Journal of Banking & Finance*, 60, 138-160. <https://doi.org/10.1016/j.jbankfin.2015.07.015>

Sunaryo, D., & Lestari, E. (2021). The effect of debt to asset ratio and debt to equity ratio against return on assets. <https://doi.org/10.4108/eai.18-11-2020.2311805>

Tahir, S., Moazzam, M., Sultana, N., Ahmad, G., Shabir, G., & Nosheen, F. (2020). Firm's risk and capital structure: An empirical analysis of seasonal and non-seasonal businesses. *Journal of Asian Finance Economics and Business*, 7(12), 627-633. <https://doi.org/10.13106/jafeb.2020.vol7.no12.627>

Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *The Journal of Finance*, 43(1), 1-19. <https://doi.org/10.1111/j.1540-6261.1988.tb02585.x>