International Journal of Application on Economics and Business (IJAEB)
Volume 1, Issue 4, 2023. ISSN: 2987-1972

THE IMPACT OF DIVERSIFICATION, SIZE, GROWTH, LOAN, DEPOSIT, EQUITY, AND LLP ON BANK RISK DURING THE COVID-19 PANDEMIC

Mia Ivana Gunawan Putri[1], Elsa Imelda[1*]

[1]Faculty of Economics and Business,Universitas Tarumanagara, Jakarta - 11470, Indonesia
[*]*Email: elsai@fe.untar.ac.id*

Submitted: 01-06-2023, Revised: 09-08-2023, Accepted: 16-10-2023

ABSTRACT

This research aims to obtain empirical evidence about the effect of revenue diversification, firm size, firm growth, loan, deposit, equity, and loan loss provision on bank risk during the COVID-19 pandemic in banking companies listed on the Indonesia Stock Exchange (IDX) for the 2020-2021 period. The number of samples was 29 banking companies selected by purposive sampling method. The data were processed and analyzed using multiple linear regression analysis techniques through EViews 9. The results showed that revenue diversification, firm growth, deposit, and loan loss provision had a significant positive effect on bank risk. Firm size and loan have a significant negative on bank risk. Equity has no significant effect on bank risk.

Keywords*: diversification, size, growth, loan, deposit, equity, LLP, risk*

1. INTRODUCTION

The COVID-19 pandemic has come as one of the major problems threatening the economy in Indonesiasince the beginning of 2020 (Satuan Tugas Penanganan COVID-19, 2021). The government requires social distancing and activities from home so that many economic sectors are affected, even experiencing bankruptcy (Badan Pusat Statistik, 2020). Therefore, the government formulates policies and programs regarding debt relief and COVID-19 restructuring to help the economic movement. However, all of these conditions have had a major impact on the banking business in Indonesia because it reduces bank interest income.

In unstable economic conditions, the main focus of banks during a pandemic is how they can survive. If banks do not survive, debtors and bank customers will also not survive and the economy will decline (Wiratmini, 2020). To be able to carry on life, the banks must be in a profitable condition (Kalesaran et al., 2020) so all banks need to develop strategies more carefully to make a profit.

Some banks are trying to increase non-interest income or to enrich bank assets and equity with digital banking. Some others focus on general bank activities such as accepting deposits and extending credit. However, banks must also realize that behind the high profit potential there are risks that must be faced, or in other word, ‘high risk - high return’.

Based on the background explanations above, the research attempts to provide the answer to the following: 1) Does revenue diversification significantly impact bank risk? 2) Does firm size significantly impact bank risk? 3) Does firm growth significantly impact bank risk? 4) Does loan significantly impact bank risk? 5) Does deposits significantly impact bank risk? 6) Does equity significantly impact bank risk? 7) Does loan loss provision significantly impact bank risk?

2. THEORETICAL REVIEW

Agency Theory

The theory that describes a relationship that occurs between the agent and the principal contractually (Ghozali, 2020). In this relationship, the principal will give certain authority to the agent to make the best decision by considering the interests of the principal. Related to this research, banks, as agents, will try to maximize profits and minimize risks borne by the company owners (shareholders), as the principal.

Markowitz's Portfolio Theory

The portfolio theory developed in 1952 by Markowitz in Hanafi (2021). In that theory, Markowitz developed a portfolio model with two parameters, namely the expected return or level of profit and the risk measured by the standard deviation. By considering risk, Markowitz in theory is able to demonstrate the benefits of portfolio diversification. Related to this research, banks can also diversify their income so that they not only focus on expected returns, but also mitigate lower and balanced risks in all unexpected conditions, such as the COVID-19 pandemic.

3. LITERATURE REVIEW

Diversification and Risk

Based on Markowitz's portfolio theory, diversification is carried out to optimize returns and risks. If the assets are not perfectly correlated, the risk generated by diversification will be lower than with an individual asset (Hanafi, 2021). Non-interest income is not correlated with interest income because it does not depend too much on the business environment (Ikhsan and Hersugondo, 2021). As a result, the increase in non-interest income in banks is expected to reduce profit volatility so that risk decreases (Ferreira et al., 2019).

This conclusion is in line with research by Li et al. (2021) who found that income diversification has a negative effect on bank risk. However, these results are different from those of Hafidiyah and Trinugroho (2016), Lee et al. (2014), and Ferreira et al. (2019).

Size and Risk

Bank size is assessed from the size of its assets (Li et al., 2021). Banks with large sizes will face greater risk than small banks because the ownership and utilization of assets in large quantities have less potential to generate profits (Nguyen and Dinh, 2021). In addition, in terms of decision-making, large banks will be faced with many choices that have various levels of risk that are more complex (Almaskati, 2022). The phenomenon of "too-big-to-fail" also occurs in large banks where they feel so strong that they are caught off guard by changes.

The results of research by Nguyen and Dihn (2021) and Almaskati (2022) explain that bank size has a positive effect on risk. Meanwhile, Atika et al. (2020) argue that bank size has a negative effect on bank risk because the larger the size of the bank, the greater the resources to manage its credit portfolio and the lower the risk that the bank will face.

Growth and Risk

Growing banks can carry out corporate and operational developments, such as digital services and innovation of financial products and services, which can attract more customers (Li et al., 2021). The more customers, the greater the trust and the greater the income. In addition, asset growth can improve business efficiency so that the company's expenses and costs are reduced and risk is lower (Wibowo and Mawardi, 2017). However, asset growth that is not supported by proper asset management can increase the bank's credit risk and bankruptcy (Lee et al., 2014).

Li et al. (2021) and Wibowo and Mawardi (2017) explain that asset growth has a negative effect on bank risk. On the other hand, Lee et al. (2014) found that asset growth has a negative effect on bank risk.

Loan and Risk

In granting credit, there is an element of risk that there is a possibility that the credit provided will fail to pay, be in arrears, be in default, or be written-off (Notasari, 2020). If the bank has weak procedures and credit monitoring, an increase in loan value will increase the value of non-performing loans and cause an increase in the bank's risk level. However, if the initial steps for granting credit and maintaining it have been carried out properly, the credit will have a good impact in minimizing risk and increasing the viability of the bank (Wibowo and Mawardi, 2017).

According to Li et al. (2021) and Wibowo and Mawardi (2017), loan-to-asset ratio shows a negative effect on bank risk. In contrast to the research by Almaskati (2022), loan has no significant effect on bank risk.

Deposit and Risk

Deposits are symbolized as the lifeblood of a bank and one of the main sources of bank finance (Haddawee and Flayyih, 2020). One of the biggest advantages of banks comes from loan interest and the biggest supporter of funds for lending is public deposits in the bank. The higher the bank's deposit funds, it is expected that the more credit needs that the bank can meet, so that the bank can receive more and more returns so that the company's finances are more stable (Ramlan, 2020). However, credit risk is threatened to increase. With sufficient stability and internal control, bank risk can be minimized (Lee et al., 2014).

According to Li et al (2021), the deposit to asset ratio has a significant negative effect on bank risk. Meanwhile, Zhou (2014) and Setiawan and Arrafi (2022) found that deposits had no significant effect on bank risk.

Equity and Risk

Equity is ownership in the form of monetary value for rights in a company that is sourced from authorized capital, sale of shares and share premium, reserve capital, and retained earnings (Atika et al., 2020). Banks with high capital will be more stable and secure because they can control their own business and are not dependent on external funding from other parties (Prabowo et al., 2018). Better equity levels indicate a better company capacity so that bank risk can be minimized and avoid bankruptcy. Banks with high equity also tend to be risk lovers to get bigger profits (Ferreira et al., 2019).

Atika et al. (2020) research results show that equity has a significant negative effect on bank risk, while Wibowo and Mawardi (2017) find that equity has no significant effect on risk. These results are inversely proportional to the research of Li et al. (2021).

Loan Loss Provision and Risk

The Loan Loss Provision will show how much the bank believes that loans granted to debtors with default conditions and the collectability position is bad can no longer be collected and repaid by creditors in the future (Pelealu and Worang, 2018). The higher the Loan Loss Provision, the higher the level of non-performing loans and indicates the risk faced by the bank on credit risk will also be higher (Nguyen and Dinh, 2021).

The results of research by Nguyen and Dinh (2021) and Wibowo and Mawardi (2017) show that Loan Loss Provision has a significant positive effect on bank risk. In contrast to these findings, according to Li et al. (2021), LLP has no significant effect on bank risk.

4. RESEARCH HYPOTHESIS

The COVID-19 pandemic has reduced public demand for bank credit due to tightening credit standards. Income diversification can reduce the level of risk faced by banks during the pandemic. Non-interest income is not correlated with interest income so that an increase in non-interest income at banks can reduce profit volatility so that risk decreases.
Ha1: Revenue Diversification has a negative and significant effect on risk.

Banks with large sizes will face greater risk than small banks. This is driven by the phenomenon of "too-big-to-fail" and greater risk in decision making. With higher public trust, small mistakes that occur in big banks will have a bigger impact than small banks so that the risk and level of prudence of large banks will be higher.
Ha2: Firm Size has a positive and significant effect on risk.

Banks with fairly high asset growth are able to reduce the level of risk they face. With the growth in assets owned, banks can make developments to increase profitability and attract more customers as well as increasing business efficiency so as to reduce expenses and generate greater and stable bank income every year. time.
Ha3: Firm Growth has a negative and significant effect on risk.

In granting credit, there is a risk of credit default, arrears, loss, or uncollectible. This is further exacerbated if the bank has weak credit monitoring and procedures. As a result, even though the loan value is high, the value of non-performing loans will also be high which causes an increase in the level of risk faced by banks.
Ha4: Loan have a positive and significant effect on risk.

Deposits are one of the main sources of bank finance. Bank's main income comes from loan interest and credit funds come from deposit funds. If there is a money rush, the bank will run a deficit and be on the verge of bankruptcy. The higher the number of deposits held by the bank, the bank will be more stable and avoid the risk of bankruptcy.
Ha5: Deposits have a significant and negative effect on risk.

The capital and resources owned by the bank will reflect the level of stability and security in the face of various conditions and changes, including the tendency to avoid liquidation. With sufficient resources, banks will not have dependence on external funding parties so that full control is on the company's internal parties. With sufficient stability and internal control, bank risk can be minimized.
Ha6: Equity has a significant and negative effect on risk.

Loan Loss Provision is a measure of the condition of a bank that reflects how much the bank believes that loans that are in default and in default can no longer be collected in the future. The higher the Loan Loss Provision, the higher the level of non-performing loans and bank risk, especially credit risk.
Ha7: Loan Loss Provision has a positive and significant effect on risk.

5. METHODS

This studyuses the descriptive research design with quantitative research methods. The data used is secondary data obtained through several official websites of the Indonesia Stock Exchange. There are 29 banking companies as the sample in this study. The sample selection used a non-probability sampling technique in the form of purposive sampling based on the following criteria: 1) Banking companies are consistently listed on the Indonesia Stock Exchange during the period January 1, 2020 to December 31, 2021. 2) General banking companies that IPO before 2020. 3) Non-sharia general banking company. 4) Banking companies that have published 2020 and 2021 Financial Statements and have been available on the Indonesia Stock Exchange during the research. 5) Banking companies that record or explain the amount of Allowance for Impairment Losses.

Operationalization of variables and instruments along with the measurement of each variable described as follows:

Table 1 Summary of Operationalization of Variables

Variable	Indicator
Revenue Diversification	NNII = $\frac{Net\ Non{-}interest\ income}{Net\ Operating\ Income}$
Firm Size	SIZE = Log natural Total Assets
Firm Growth	ΔTA = $\frac{Total\ Asset\ t + Total\ Asset\ t{-}1}{Total\ Asset\ t{-}1}$
Loan to Assets	LAR = $\frac{Total\ Loan}{Total\ Assets}$
Deposit to Assets	DTAR = $\frac{Total\ Deposit}{Total\ Assets}$
Equity to Assets	EAR = $\frac{Total\ Equity}{Total\ Assets}$
Loan Loss Provision	LLP = $\frac{Loan\ Loss\ Provision}{Total\ Assets}$
Risk	SDROA = S$D.S\ ROAt, t-1$

6. RESULTS AND CONCLUSION

Chow test, Hausman test, and Lagrange Multiplier test were carried out to determine the most appropriate regression model used for the regression equations in this study (Basuki and

Prawoto, 2015). Based on the results of the Chow test, a cross-section F probability value of 0.0000 is obtained which can be concluded that the correct model used is the Fixed Effect Model (FEM). The test then proceeds to the Hausman test to determine whether the Fixed Effect Model (FEM) is indeed the most appropriate to use for the regression equation [4]. The results of the Hausman test indicate that the significance value is < 0.05, so the model chosen is the Fixed Effect Model (FEM). Based on this test, it can be concluded that the most appropriate regression model used is the Fixed Effect Model (FEM).

The Fixed Effect Model (REM) was chosen as the most suitable regression model based on the test results. Table 2 below shows the output findings for the regression equation.

Table 2 The Results of Regression Analysis

Variable	Coefficient	Std.Error	t-Statistics	Prob
C	0.704692	0.181174	3.889585	0.0008
X1	0.091503	0.041316	2.214714	0.0374
X2	-0.067068	0.015300	-4.383625	0.0002
X3	0.053975	0.007086	7.617045	0.0000
X4	-0.135800	0.030518	-4.449886	0.0002
X5	0.144961	0.059607	2.431962	0.0236
X6	-0.150060	0.089039	-1.685331	0.1061
X7	0.985638	0.121130	8.137032	0.0000

Based on the output above, it can be concluded that the regression equation is as follows:

$$Y = 0.704692 + 0.091503\ X1 - 0.067068\ X2 + 0.053975\ X3 - 0.135800\ X4 + 0.144961\ X5 - 0.150060\ X6 + 0.985638\ X7 + e$$

Based on the results of the equation, it can be concluded that diversification has a positive slope (β = 0.091503) and significant (sig. = 0.0374) impact on bank risk. This means that the more massively banks diversify their income during the COVID-19 pandemic, the costs will increase with an uncertain success rate so that the bank's risk is threatened to increase, and vice versa.

Firm size has a negative slope (β = -0.053975) and significant (sig. = 0.0000) impact on bank risk. The larger the size of a bank, the greater the resources and public trust owned by the bank so that the risks faced during the COVID-19 pandemic will be lower.

Firm growth has a positive slope (β = 0.067068) and significant (sig. = 0.0002) impact on bank risk. Growing banks will be encouraged to dare to take greater risks as well as an effort to increase income from the growth of existing assets (risk lover). So, the higher the asset growth of a bank, the higher the risk taken by the bank.

Loan has a negative slope (β = -0.135800) and significant (sig. = 0.0002) impact on bank risk. With good credit procedures and monitoring, the higher the loan given, the higher the income received by the bank so that the risk faced by the bank during a pandemic will decrease because the bank will be stronger and more stable.

Deposit has a positive slope (β = 0.144961) and significant (sig. = 0.0236) impact on bank risk. The higher the number of deposits held by the bank, the more daring the bank is to take business risks (risk lover), by providing more credit to the public. This has the potential to increase bank risk, especially if the quality of the monitoring and analysis process is not maintained.

Equity has a negative slope (β = -0.150060) and insignificant (sig. = 0.1061) impact on bank risk. An increase in equity can affect the reduction in risk faced by banks. However, the proportion of equity in funding all of the company's assets is not high enough, only about 19-20% on average, so the effect given by equity on risk reduction can be said to be not significant during the COVID-19 pandemic.

Loan Loss Provision (LLP) has a positive slope (β = 0.985638) and significant (sig. = 0.0000) impact on bank risk. The higher the Loan Loss Provision is, the higher the level of non-performing loans and bank risk will be, especially the credit risk.

To be able to find out how the percentage of dependent variation, bank risk, which can be explained by the independent variables, namely diversification, size, growth, loan, deposit, equity, and loan loss provision, a determination test is carried out. The output of the determination test shows that the adjusted R-Square value is 0.831753. It means that the independent variable used in this study can explain about 83.17% of bank risk variations, while the other 16.83% is explained by other variables outside the study. Based on this result, it can be concluded that there is a strong influence of the independent variables, such as revenue diversification, firm size, firm growth, loan, deposit, equity, and loan loss provision on bank riskduring the COVID-19 pandemic period.

To find out whether all of the independent variables selected in this study together have a significant effect on the dependent variable, a simultaneous test (F-test) was conducted. Simultaneous test results show the probability value of F is 0.000001 which can be concluded that revenue diversification, firm size, firm growth, loan, deposit, equity, and loan loss provision can simultaneously affect bank risk.

7. DISCUSSION AND LIMITATIONS

This reseach aims to obtain empirical evidence about the effect of revenue diversification, firm size, firm growth, loan, deposit, equity, and loan loss provision on bank risk during the COVID-19 pandemic in banking companies listed on the Stock Exchange Indonesia for the 2020-2021 period. The number of samples were 29 banking companies selected by purposive sampling method.

Based on the results of the equation, it can be concluded that diversification has a positive and significant impact on bank risk (Ha1 rejected). This means that the more massively banks diversify their income during the COVID-19 pandemic, the costs will increase with an uncertain success rate so that the bank's risk is threatened to increase, and vice versa. Banks are still dependent on interest income, as indicated by the low average portion of non-interest income in the bank's total operating income, which is only around 23%.In addition, bank preparations in diversifying income are immature and sudden during the pandemic, so the costs that must be incurred are large. Besides that, the success rate of diversification is still uncertain due to unexpected changes in the pandemic period. This study shows that the application of Markowitz's portfolio theory in real practice by conducting revenue diversification in unstable conditions, such as the COVID-19 pandemic, has not succeeded in minimizing the level of risk faced by banks. The impact of revenue diversification will be seen more clearly in the long term so it needs to be prepared early by the company. The results of this study are in line with Hafidiyah and Trinugroho (2016) and Lee et al. (2014), but differ from the findings of Ikhsan and Hersugondo (2021), Zhou (2014), and Li et al. (2021).

Firm size has a negative and significant impact on bank risk (Ha2 rejected). The larger the size of a bank, the greater the resources and public trust owned by the bank so that the risks faced during the COVID-19 pandemic will be lower. Large banks have more assets and resources than small banks. These greater assets and resources make it easier for banks to move and adapt to circumstances. In addition to adapting, large banks also have higher trust from the public and investors compared to smaller banks. With this trust, it is easier for banks to maintain funds and customers so that the survival of the bank will be more guaranteed. In other words, banks will face lower risks, including the risk of bankruptcy in the midst of the COVID-19 pandemic that prompted the monetary crisis in Indonesia. The results of this study are in line with Atika et al. (2020), but different from Hafidiyah and Trinugroho (2016), Almaskati (2022), and Li et al. (2021).

Firm growth has a positive and significant impact on bank risk (Ha3 rejected). During the pandemic, the uncertainty that occurs makes the risks faced by banks become even greater. Growing banks will be encouraged to dare to take greater risks as well as an effort to increase income from the growth of existing assets (risk lover). However, asset growth that is not accompanied by proper management can actually increase the bank's risk of credit risk and bankruptcy, especially if the funding for bank growth efforts mostly comes from third party debt. So, the higher the asset growth of a bank, the higher the risk taken by the bank. The results of this study are in line with Li et al. (2021), but different from Hafidiyah and Trinugroho (2016), and Wibowo and Mawardi (2017).

Loan has a negative and significant impact on bank risk (Ha4 rejected). Loans are the main source of bank income, which comes from yields and other credit costs. The higher the loan provided, the higher the income received by the bank so that the risk faced by the bank in the midst of a pandemic will decrease, in other words, the bank will be stronger and more stable than if the lending has decreased. With good credit procedures and monitoring, the higher the loan given, the higher the income received by the bank so that the risk faced by the bank in the midst of a pandemic will decrease because the bank will be stronger and more stable.The results of this study are in line with Li et al. (2021) and Wibowo and Mawardi (2017), but different from Almaskati (2022).

Deposit has a positiveand significant impact on bank risk (Ha5 rejected). Basically, deposits are one of the main sources of bank finance because the bank's main income comes from loan interest and credit funds come from deposit funds. If people withdraw all their funds from the bank (rush money), the bank will run a deficit and be on the verge of bankruptcy. In the other side, the higher the number of deposits held by the bank, the more daring the bank is to take business risks (risk lover), by providing more credit to the public. This has the potential to increase bank risk, especially if the quality of the monitoring and analysis process is not maintained. The results of this study are in line with Zhou (2014), but different from the findings of Setiawan and Arrafi (2022) and Li et al. (2021).

Equity has a negative and insignificant impact on bank risk (Ha6 rejected). An increase in equity can affect the reduction in risk faced by banks. However, the proportion of equity in funding all of the company's assets is not high enough, only about 19-20% on average, so that the effect given by equity on risk reduction can be said to be not significant during the COVID-19 pandemic. In addition, banks are still not able to utilize their resources and capital to adapt and cope with very fast changes during the pandemic so that efforts to minimize the risks they face are not optimal. The results of this study are in line with Wibowo and Mawardi (2017), but different from Atika et al., [2020] and Li et al. (2021).

Loan Loss Provision (LLP) has a positive and significant impact on bank risk (Ha7 accepted). The higher the Loan Loss Provision, the higher the level of non-performing loans and bank risk, especially credit risk. The results of this study are in line with Wibowo and Mawardi (2017) and Nguyen and Dihn (2021), but different from Li et al. (2021).

Based on the results of the research above, it can be concluded that revenue diversification, bank growth, deposit, and loan loss provision have a significant positive effect on the bank risk. Bank size and loan have a significant negative effect on the bank risk. Meanwhile, equity has no effect on the bank risk during the COVID-19 pandemic.

The results of this study indicate that revenue diversification during the pandemic is not fully in line with Markowitz's portfolio theory, that said about the benefit of diversification to decrease the risk. This needs to be a concern for banks to learn and consistently diversify from an early age so that in the unexpected, the benefits of diversification in minimizing risk can be felt more significantly.

Banks with high asset growth and deposit amounts are risk lovers during the COVID-19 pandemic era. Besides, bank that have weak procedure and monitoring credit record high loan loss provision on their financial statement. However, banks need to remember and take into account the level of management and monitoring of them, including improving credit procedures and monitoring, in order to maintain the viability of the bank.

The larger the bank, the smaller risk level that bank must face during the pandemic. This should be concern by the small bank because the impact can be continued until this era of post-pandemic. Changes in behavior and economic conditions since the onset of the pandemic need to be considered by all banks, especially small banks, in managing existing assets and generating greater profits to avoid the risk of bankruptcy.

In this study, it can be seen that the loan rate is neither a problem nor a risk for banks as long as the initial analysis process and ongoing monitoring are well maintained. In fact, by increasing lending, which is the main source of bank income, it can increase bank profits and help banks remain stable amid the pandemic conditions for the past 2 years.

This research is not free from all limitations. In this study, only seven independent variables were used, such as revenue diversification, firm size, firm growth, loan, deposit, equity, and loan loss provision. In future research, more independent variables can be used that can be a determining factor for the bank risk, such as leverage, cash holding, macroeconomic, and others. In this study, only banking companies were used as samples with a period of 2 years from 2020-2021, especially during the COVID-19 pandemic period. In future research, it would be better to be able to analyze other sectors such as companies in the manufacture, hotels, property, real estate and construction sectors with the use of a longer research period.

REFERENCES

Almaskati, N. (2022). The Determinants of Bank Profitability and Risk: A Random Forest Approach. *Cogent Economics & Finance*.

Atika, R., Husaini, & Ilyas, F. (2020). Konsentrasi Kepemilikan, Struktur Dewan Komisaris dan Risiko Kredit Bank yang Terdaftar di Bursa Efek Indonesia. *Jurnal Fairness, 10(2),* 115-124.

Badan Pusat Statistik. (2020). *Anala\isis Hasil Survei Dampak COVID-19 Terhadap Pelaku Usaha #2.* Jakarta: BPS RI.

Basuki, A. T., & Prawoto, N. (2015). *Analisis Regresi Dalam Penelitian Ekonomi dan Bisnis.* Yogyakarta: Raja Grafindo Persada.

Ferreira, J. H., Zanini, F. A., & Alves, T. W. (2019). Bank Revenue Diversification: Its Impact on Risk and Return in Brazilian Banks. *Revista Contabilidade & Financas, 30*, 91-106.

Ghozali, I. (2020). *25 Grand Theory: 12 Teori Besar Ilmu Manajemen, Akuntansi, dan Bisnis (Untuk Landasan Teori Skripsi, Tesis, dan Disertasi).* Semarang: Yoga Pratama.

Haddawee, A. H., & Flayyih, H. H. (2020). The Relationship between Bank Deposits and Profitability for Commercial Banks. *International Journal of Innovation, Creativity, and Change*.

Hafidiyah, M. N., & Trinugroho, I. (2016). Revenue Diversification, Performance, and Bank Risk: Evidence from Indonesia. *Jurnal Dinamika Manajemen, 7(2)*, 139-148.

Hanafi, M. M. (2021). *Teori Portofolio dan Analisis Investasi: Review Teori dan Bukti Empiris.* Yogyakarta: Gadjah Mada University Press.

Ikhsan, S., & Hersugondo. (2021). Diversifikasi Pendapatan terhadap Profitabilitas dan Risiko Bank di Indonesia Selama Pandemi COVID-19. *Dinamika Akuntansi, Keuangan dan Perbankan, 10(1)*, 76-83.

Kalesaran, D., Mangantar, M., & Tulung, J. E. (2020). Pengaruh Pertumbuhan Perusahaan, Kebijakan Dividen, dan Struktur Modal terhadap Profitabilitas pada Industri Perbankan yang Terdaftar di BER (Periode 2014-2017). *Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 8(3),* 184-192.

Lee, C. C., Yang, S. J., & Chang, C. H. (2014). Non-interest income, profitability, and risk in banking industry: A cross-country analysis. *North American Journal of Economics and Finance*, *27*, 48-67.

Li, X., Feng, H., Zhao, S., & Carter, D. A. (2021). The Effect of Revenue Diversification on Bank Profitability an Risk During The COVID-19 Pandemic. *Finance Research Letters*.

Nguyen, P. A., & Dinh, T. T. (2021). Factors Affecting Bank Risks in Vietnam. *International Journal of Economics and Finance*, 13(10).

Notasari, E. D. (2020). *Analisis Sistem Akuntansi Pemberian Kredit dan Perhitungan Bunga Kredit Angsuran Sistem Fidusia (Kreasi) pada PT. Pegadaian (Pesero) Cabang Ponorogo*. (Skripsi yang tidak dipublikasikan). Universitas Muhammadiyah Ponorogo.

Pelealu, I. W., & Worang, F. G. (2018). Analysis The Effect of Loan Loss Provision on Bank Profitability. *Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 6(4)*, 3278-3287.

Prabowo, F. P., Halim, Sarita, B., Syaifuddin, D. T., Sujono, Saleh, S., Budi, N. (2018). Effect of Equity to Assets Ratio (EAR), Size, and Loan to Assets Ratio (LAR) on Bank Performance. *IOSR Journal of Economics and Finance*, 9(4), 01-06.

Ramlan. (2020). Effect of Asset Quality, Liquidity, Solvability, Efficiency, and Good Corporate Governance (GCG) Toward Go Public Bank Profitability in Indonesia. *Nuturing Business and Banking Sustainability* (pp. 338-350).

Satuan Tugas Penanganan COVID-19. (2021). *Tentang COVID-19*. Retrieved from covid19.go.id: https://covid19.go.id/id/tentang-covid-19

Setiawan, R., & Arrafi, A. N. (2022). Pengaruh Diversifikasi Pendapatan Terhadap Profitabilitas dan Risiko Bank pada Bank Umum Konvensional di Indonesia Selama Pandemi COVID-19. *Jurnal Ekonomi dan Bisnis, 10(2),* 392-401.

Wibowo, A. P., & Mawardi, W. (2017). Pengaruh Non Interest Income, Growth of Asset, Loan to Asset, CAR, dan Loan Loss Provision to Asset Terhadap Risiko Bank. *Diponegoro Journal of Management 6(4)*, 1-14.

Wiratmini, N. P. (2020, Mei 5). *Bank Putar Otak, Atur Strategi Bertahan Hadapi Corona*. Retrieved from Bisnis.com: https://finansial.bisnis.com/read/20200505/90/1236418/bank-putar-otak-atur-strategi-bertahan-hadapi-corona

Zhou, K. (2014). The Effect of Income Diversification on Bank Risk: Evidence from China. *Emerging Markets Finance and Trade*, 201-213.