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# The Effect of Operational Risk, Credit Risk And Revenue Diversification on Profitability

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**Abstract**
This study aims to determine the effect of Operational Risk, Credit Risk, and Income Diversification on Profitability in banking companies listed on the IDX for the 2016-2020 period. The analytical method used is Panel Data Regression analysis. The results obtained from this study: i) Operational Risk has a positive and significant effect on profitability in banking companies listed on the IDX for the 2016-2020 period. ii) Credit Risk has a negative and significant effect on profitability in banking companies listed on the IDX for the 2016-2020 period. iii) Income Diversification has a negative and significant effect on profitability in banking companies listed on the IDX for the 2016-2020 period. iv) Operational Risk, Credit Risk, and Diversification have a positive and significant simultaneously positive and significant effect on Profitability in Banking companies listed on the IDX for the 2016-2020 period.

**Keywords:** Operational Risk, Income Diversification Credit Risk, Profitability

## 1. Introduction

Companies that can maintain the life of their companies in the long term can show good opportunities in the future. With this, the company must get a profit or profit in goods or services to prosper. The only way to make a profit, compete and survive in the business world is to grow and develop where many banking companies compete to achieve their goals to get the best profit. Therefore, banks are required to have an excellent ability to increase profits.

A bank is a financial institution that provides services in accepting deposits and lending money from customers to customers in need. According to Law Number 10 of 1998 concerning Banking, a Bank is said to be a business entity that collects funds from the public in the form of savings and distributes funds to the people in the form of credit or other documents to improve people's living standards. Banks have a role as an intermediary or liaison between parties who have excess funds and those with shortages of funds. The main activity in banking is trust, raising funds and distributing funds (Agent of Trust). Banks also have a critical role in collecting funds and channeling them to the real sector to encourage economic growth (Agent of Development). So that more and more new banks are coming as well as expansion and facilities, resulting in a very tight competition between banks with other banks. Therefore, companies, especially banks, must strive to increase profitability.

Profitability is a company's ability to generate profits in a certain period by using assets, sales, and own capital. According to (Safei, 2020), profitability is the company's ability to earn profits in sales, total assets, and own capital. Profitability is an income obtained from a company activity carried out in a certain period (Herlina, Nugraha, 2016). A high level of profitability can show the ability that the company can meet obligations. This level of profitability is measured using the Return On Asset (ROA) financial ratio because ROA focuses more on the company's ability to earn earnings in the company's overall operations (Safei, 2020). The profitability ratio used is Return on Assets (ROA), which compares profit before tax to total assets (Ni Wayan Wita Capriani, 2016). So that the higher the level of Return on Assets, the higher the level of profitability, which means the company's performance is getting better. The following table shows the average profitability growth of banks listed on the IDX using Return On Assets (ROA) during the 2016-2020 period:

From table 1 below, it can be seen that the profitability of banking companies in 2016 was 1.91%, and in 2017 it decreased by 1.68% and decreased in 2018 by 1.54% and decreased again in 2019 by 1.49% and decreased again in 2020 by 1.23%.

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**Table 1**
**Average Profitability Growth Using Return On Assets (ROA) in Banks Listed on the IDX 2016-2020**

| Year | ROA (%) |
|---|---|
| 2016 | 1,91 |
| 2017 | 1,68 |
| 2018 | 1,54 |
| 2019 | 1,49 |
| 2020 | 1,23 |

*Source: www.idx,co.id processed*

From the table above, it can be seen that the profitability of banking companies in 2016 was 1.91%, and in 2017 it decreased by 1.68% and decreased in 2018 by 1.54% and decreased again in 2019 by 1.49% and decreased again in 2020 by 1.23%. So that it can be seen through a graph like the figure below :

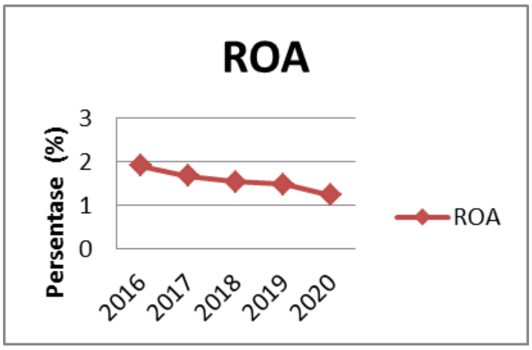


**Figure 1.**
**Graph of Average Return On Asset Growth**

From the graph above, it can be seen that banking profitability is experiencing instability. Therefore, the bank continues to work on how or what strategy so that customers join the bank to compete with other banks and profitability. One of the causes of changes in profitability is operational risk. Operational risk is the risk caused by the lack of function of the bank's internal processes, human error, technological system failure, or external problems that can harm the bank's company. Operational risk is the risk caused by the lack of functioning of the bank's internal processes, human error, failure of the technology system, or due to external problems (Ni Wayan Wita Capriani, 2016). According to (Safei, 2020) Operational Risk is a risk that is caused, among others, by inadequate or non-functioning internal processes, human errors, system failures, or external problems that affect bank operations.

In operational risk using BOPO (Operating Expenses to Operating Income) as a supporting measuring tool. In general, BOPO shows the bank's ability to control operating costs on operating income. With high operating expenses with bank income, it can cause losses to banking companies to decrease so that profitability will decrease, as is what is said (Ni Wayan Wita Capriani, 2016) which states that the higher operating expenses that almost equal or exceed operating income, the bank's profit will decrease. thus affecting the decrease in ROA. In addition to Operational Risk as one of the factors of changes in profitability, there is also credit risk. Credit risk is the risk caused by the failure or inability of the customer to repay the loan amount received by the customer along with interest according to a certain period. The non-fulfillment of debtor obligations causes credit risk to creditors (Ni Made Elin Sukmawati, 2016). According to (Ni Wayan Wita Capriani, 2016), credit risk is the risk that the bank will suffer due to not paying off the credit given by the bank to the debtor.

In addition to operational and credit risk, one factor affecting profitability is income diversification. Diversification is a way for companies to develop their products by expanding their business to increase growth, sales, and profitability. According to (Candra Yuwono Kusumo, 2018), Diversification is a business development strategy carried out by industry and geographical expansion; diversification can be done by opening new business lines, expanding existing product variants, expanding product marketing areas, opening branch offices, conducting mergers, acquisitions and other. According to (Aditya Mahendra Putra, 2019), income diversification is a strategy carried out by banks to obtain income that comes from interest differences and non-interest income obtained from various financial services and other banking products. Banks that carry out diversification of income are helpful for banks through financial services and products, so customers can choose from the choice of products or services provided by the bank that are offered to customers and expand the company's business to various areas so that it affects the company's profitability. It makes the company diversify, including banking companies, to compete with other companies and gain profitability. Income diversification carried out by banks gives consumers a choice of product choices provided by banking companies and expands the company's marketing to various places so that it will affect the level of company profitability.

## 2. Method

This research is research with a quantitative approach. The location of this research was conducted on the Indonesia Stock Exchange (IDX), which is used to be accessed through the IDX's official website, namely from www.IDX.co.id. The population of this study is the banking sector companies listed on the IDX for the 2016-2020 period. Researchers have selected samples based on predetermined criteria and determined as many as 38 companies that meet the requirements of the total population of 46 companies. The number of sample units in this study was 190 sample units consisting of 38 companies for five years. Test analysis using panel data regression with EVIEWS software.

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## 3. Result And Discussion

### Result

The result of the multicollinearity test are shown in table 2 below:

**Table 2. Multicollinearity Test Results**

| | BOPO | NPL | DIVPEN |
|---|---|---|---|
| BOPO | 1 | - | - |
| NPL | 0.012 | 1 | - |
| DIVPEN | -0.053 | -0.086 | 1 |

Note: BOPO: Operating Burden on Operating Income, NPL: Net Performing Loan, DIVPEN: Income Diversification

From table 2 above, it can be seen that this model is not affected by multicollinearity problems where the interaction value between variables in this study does not have a value more than the tolerance limit of 0.8.

**Table 3. Heteroscedasticity Test Results**

Heteroskedasticity Test: White

| | | | |
|---|---|---|---|
| F-statistic | 4.174315 | Prob. F(9,180) | 0.1783 |
| Obs*R-squared | 32.80837 | Prob. Chi-Square(9) | 0.1762 |
| Scaled explained SS | 28.26930 | Prob. Chi-Square(9) | 0.2055 |

Based on table 3, it can be seen that the probability value of the R-squared observation generated is 0.1762. The results obtained indicate that the probability value generated shows 0.1762 > 0.05 so it can be concluded that all research variables, both independent and dependent variables that will be formed into the panel data regression model, are free from heteroscedasticity symptoms.

**Table 4. Partial Test Results (t-test)**

Dependent Variable: ROA

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 1.367 | 0.630 | 2.169 | 0.0317 |
| BOPO | 0.270 | 0.130 | 2.093 | 0.0380 |
| NPL | -0.125 | 0.053 | -2.323 | 0.0215 |
| DIVIPEN | -3.092 | 0.821 | -3.762 | 0.0002 |

Notes: Roa: Return On Asset, BOPO: Operational Burden on Operating Income, NPL: Net Performing Loan, DIVPEN: Income Diversification

Based on table 4 above, it can be concluded as follows:

a. Effect of Operational Risk on Profitability. From the table above, it is known that the t statistic of the Operational Risk (BOPO) variable is 2.093 with a significant level (0.03 <0.05). This means that partially there is a positive and significant effect of Operational Risk (BOPO) on Profitability. Thus, HO is rejected, H1 is accepted.

b. The Effect of Credit Risk on Profitability
From the table above, it is known that the t statistic of the Credit Risk (NPL) variable is -2,323 with a significant level (0.02 < 0.05). This means that partially there is a negative and significant effect of Credit Risk (NPL) on Profitability. Thus, HO is rejected, H2 is accepted.

c. The Effect of Income Diversification on Profitability. From the table above, it is known that the t statistic of the Income Diversification (DIVPEN) variable is -3.762 with a significant level (0.00 < 0.05). This means that partially there is a negative and significant effect of Income Diversification on Profitability. Thus HO is rejected H3 is accepted.

**Table 5. F Test Results Statistics**

| | | | |
|---|---|---|---|
| F-statistic | 7.500 | Durbin-Watson stat | 2.004 |
| Prob(F-statistic) | 0.000 | | |

*Source: The results of data processing using Eviews 10*

Based on table 4.8 above, it is also found that the prob value is 0.00 < 0.05. These results also show Fcount 7,500, so the authors can conclude that the variables of Operational Risk (X1), Credit Risk (X2), and Income Diversification (X3) together have a positive and significant effect on Profitability (Y). Thus HO is rejected H4 is accepted

**Table 6. Results of the Coefficient of Determination (R2)**

| | |
|---|---|
| R-squared | 0.67 |
| Adjusted R-squared | 0.58 |

*Source: Processed data using Eviews 10*

The estimation results in table 4.10 show that the adjusted R-squared value obtained is 0.58 or 58%. This indicates that the contribution of the independent variables, namely Operational Risk, Credit Risk, and Income Diversification, to the dependent variable, namely profitability, is 58%. The remaining 42% is determined by other variables not analyzed in the model in this study.

### Discussion

From the results of the analysis, the results of the discussion regarding the effect of Operational Risk, Credit Risk, and Income Diversification on Profitability in banking companies listed on the Indonesia Stock Exchange in 2016-2020 are as follows:

1. Operational Risk has a significant effect on profitability.

Thus, HO is rejected, H1 is accepted. From the results of the statistical t-test of the Operational Risk (BOPO) variable, it was 2.093 with a significant level (0.03 <0.05). This means that partially there is a positive and significant effect of Operational Risk (BOPO) on Profitability. We can see this from the bank officer's error in verifying customer data which causes a lot of weak financing analysis, causing a lot of problematic financing in the future. The results of this study are in line with the results of research conducted by (Safei, 2020) which suggests that Operational Risk has a significant positive effect on profitability.

2. Credit Risk has a significant effect on profitability.
   From the table above, it is known that the t statistic of the Credit Risk (NPL) variable is -2,323 with a significant level (0.02 < 0.05). This means that partially there is a negative and significant effect of Credit Risk (NPL) on Profitability. Thus, HO is rejected, H2 is accepted. Credit risk is the risk caused by the failure or inability of the customer to repay the loan amount received by the customer along with interest according to a certain period of time. This reflects that the high level of activity of the customer's inability to repay the loan amount to the banking company can lead to a high level of risk borne by the banking company so that it has an impact on the company's low profit to bear all forms of credit risk. The results of this study are in line with the results of research conducted by (Kumaralita & Purwanto, 2019) which suggests that Credit Risk has a negative and significant effect on profitability. And other research also suggests that Credit Risk has a negative and significant effect on Profitability (Cristina & Artini, 2018), and is also in line with research (Ni Made Elin Sukmawati, 2016) that Credit Risk has a negative and significant effect on profitability.
3. Income Diversification affects profitability
   From the table above, it is known that the t statistic of the Income Diversification (DIVPEN) variable is -3.762 with a significant level (0.00 < 0.05). This means that partially there is a negative and significant effect of Income Diversification on Profitability. Thus, HO is rejected, H3 is accepted. This can happen because the returns obtained from the diversification process cannot cover the costs that have been incurred. Income diversification is a strategy undertaken by banks to obtain income that is sourced from interest differences and non-interest income derived from various financial services and other banking products. The results of this study are in line with the results of research conducted by (Yustyarani & Yuliana, 2020) which suggests that Income Diversification has a negative and significant effect on profitability.
4. Operational Risk, Credit Risk and Diversification have a significant effect on profitability.
   Based on the simultaneous test, it was found that the prob. value was 0.00 < 0.05. These results show Fcount 7,500, so the authors can conclude that the variables of Operational Risk (X1), Credit Risk (X2), and Income Diversification (X3) together have a positive and significant effect on Profitability (Y). Thus HO is rejected H4 is accepted**.** The adjusted R-squared value obtained is 0.58 or 58%. This indicates that the contribution of the independent variables, namely Operational Risk, Credit Risk and Income Diversification, to the dependent variable, namely profitability, is 58% and the remaining 42% is determined by other variables not analyzed in the model in this study. Profitability is an ability carried out by companies that can measure the level of success in generating profits in a certain period to see the potential, growth, and development prospects of the company well. So a company that is declared successful if it can achieve the standards and goals set by the company.

## 4. Conclusion

Based on data analysis, interpretation of research results, and discussion of research results that have been submitted previously, the following can be stated:

1. Operational Risk (BOPO) has a positive and significant effect on profitability in banking companies listed on the IDX for the 2016-2020 period.
2. Credit Risk (NPL) has a negative and significant effect on profitability in banking companies listed on the IDX for the 2016-2020 period.
3. Income Diversification (DIVPEN) has a negative and significant effect on profitability in banking companies listed on the IDX for the 2016-2020 period.
4. Operational Risk (BOPO), Credit Risk (NPL) and Income Diversification (DIVPEN) simultaneously have a positive and significant effect on profitability in banking companies listed on the IDX for the 2016-2020 period.

**Suggestion**

Based on the conclusions described above, the researchers can put forward some suggestions as follows::

1. For Companies
   The need for company management to pay special attention to increasing profitability. Based on these results, it is expected that companies, both subject and outside this research, can pay attention to the factors used to optimize profitability. So that what can be done by financial managers is to increase profits so that the company's value increases. Besides that, managers must be careful in determining credit to optimize profitability.
2. For Investors
   For investors who have a relationship with a bank, of course, they must further improve the supervision of banking profitability so that investors can consider which company is the target to invest in.
3. For other researchers
   It is better to add other variables so that the research is more meaningful and more detailed regarding the reasons that affect profitability and test other variables such as dividend policy, size, and stock price.

**References**

Aditya Mahendra Putra, I. R. D. P. (2019). Pengaruh Struktur Pasar, Kompetisi, Diversifikasi, Dan Risiko Kredit Terhadap Profitabilitas Bank Dengan Bank Size Sebagai Variabel Kontrol (Studi Pada Bank Yang Terdaftar Di Bursa Efek Indonesia). *Diponegoro Journal of Management*, *8*(1), 117–125.

Candra Yuwono Kusumo, A. D. (2018). Pengaruh Perputaran Modal Kerja, Ukuran Perusahaan, Dan Diversifikasi Terhadap Profitabilitas (Studi Pada Perusahaan Food And Beverage Yang Terdaftar Di Bei Periode 2013 – 2016). *Jurnal Administrasi Bisnis (JAB)*, *57*(1), 83–89. administrasibisnis.studentjournal.ub.ac.id%0A89

Cristina, K. M., & Artini, L. G. S. (2018). Pengaruh Likuiditas, Risiko Kredit, dan Pihak Ketiga Terhadap Profitabilitas Pada BPR. *E-Jurnal Manajemen Universitas Udayana*, *7*(6), 3353–3383.

Heri Susanto, N. K. (2016). Analisis Rasio Keuangan Terhadap Profitabilitas Pada Perbankan Indonesia. *E-Jurnal LP3M STIEBBANK*, *7*(1), 11–12.

Herlina, Nugraha, I. P. (2016). PENGARUH RISIKO KREDIT TERHADAP PROFITABILITAS (Studi Kasus Pada Bank Umum Swasta Nasional Devisa Tahun 2010-2014). *Journal of Business Management Education (JBME)*, *1*(1), 31–36. https://doi.org/10.17509/jbme.v1i1.2276

Kasmir. (2016). *Analisis Laporan Keuangan*. Jakarta: PT. Raja Grafindo Persada.

Kumaralita, P. W., & Purwanto, A. (2019). Analisis Pengaruh Risiko Kredit Terhadap Profitabilitas (Studi Pada Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia Periode 2014-2017). *Diponegoro Journal of Accounting*, *8*(1), 1–13.

Ni Made Elin Sukmawati, I. B. A. P. (2016). Pengaruh Pertumbuhan Dana Pihak Ketiga, Pertumbuhan Kredit, Risiko Kredit, Likuiditas, Dan Kondisi Ekonomi Terhadap Profitabilitas. *E-Jurnal Manajemen Universitas Udayana*, *5*(9), 5398–5432.

Ni Wayan Wita Capriani, I. M. D. (2016). Pengaruh Risiko Kredit Risiko Operasional Dan Risiko Likuiditas Terhadap Profitabilitas Bpr Di Kota Denpasar. *E-Jurnal Manajemen Universitas Udayana*, *5*(3), 1486–1512.

Nurul Sukma, Ivonne S. Saerang, J. E. T. (2019). Pengaruh Dana Pihak Ketiga, Risiko Kredit, Risiko Pasar Dan Risiko Operasional Terhadap Profitabilitas Pada Bank Kategori Buku 2 Periode 2014-2017. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *7*(3), 2751–2760. https://doi.org/10.35794/emba.v7i3.23739

Rahmat Setiawan, A. S. (2018). Diversifikasi Pendapatan, Kepemilikan Pemerintah, Kinerja Dan Risiko Bank. *Jurnal Dinamika Ekonomi & Bisnis*, *15*(1), 49–59. https://doi.org/10.34001/jdeb.v15i1.917

Safei, D. M. (2020). Pengaruh Risiko Pembiayaan Dan Risiko Operasional Terhadap Profitabilitas Di Bank Bjb Syariah Kantor Cabang Tasikmalaya. *Inklusif (Jurnal Pengkajian Penelitian Ekonomi Dan Hukum Islam)*, *5*(1), 35–49. https://doi.org/10.24235/inklusif.v5i2.5264

Yustyarani, W., & Yuliana, I. (2020). Efek Mediasi Profitabilitas: Modal Intelektual, Diversifikasi Pendapatan dan Nilai Perusahaan. *Esensi: Jurnal Bisnis Dan Manajemen*, *10*(1), 83–94. https://doi.org/10.15408/ess.v10i1.15564