Available at http://jurnal.stie-aas.ac.id/index.php/jap
Jurnal Akuntansi dan Pajak

# EFFECT OF *FINANCING TO DEPOSIT RATIO* (FDR), *OPERATING COSTS OPERATING INCOME* (BOPO) ON FINANCIAL DISTRESS IN ISLAMIC COMMERCIAL BANKS IN INDONESIA

**Desty Prawatiningsih**
UIN Sultan Maulana Hasanuddin Banten, Indonesia
Email: Desty.prawatiningsih@uinbanten.ac.id

***Abstract***

*This study aims to determine the factors that affect financial distress measured using the artificial neural network method in Islamic banking in Indonesia, where this study is a quantitative study that uses a data processing tool, namely SPSS version 20. The results of this study show that what affects financial distress when measured using the artficial neural network method is only operating income operating costs (BOPO) which have a significant positive influence while for other facto-factors such as Financing to Deposit Ratio (FDR) does not have a significant positive influence, after being tested together the three factors that affect financial distress can produce a positive and significant influence.*

***Keywords :*** *Financing to Deposit Ratio (FDR), Operating Costs operating income (BOPO) and Financial Distress*

## 1. INTRODUCTION

Banking is one of the *agents of development.* This happens because of the main function of the banking itself, namely as an institution that collects funds from the wider community in the form of deposits and disburses back to the public in the form of credit or financing. This function is what makes banks usually referred *to as financial intermediary functions.* Abdul Ghofur Anshori *(2008)*

Islamic banks are financial institutions that function to facilitate economic mechanisms in the real sector through business activities (investment, buying and selling, or other activities) based on sharia principles, namely those based on Islamic law between banks and other parties for depository of funds or financing of business activities, and other activities that can be declared in accordance with sharia values that are macro or micro. Ascarya (2015) Financing if broadly defined is funding issued in order to support planned investments both made by yourself and carried out by others. Based on this definition, it can be concluded that financing is the provision of fund facilities in order to support investments that have been designed based on the results of an agreement between two parties, namely the financed party and require the financed party to be able to return the funds after the agreed period and profit sharing. Lukman Hakim (2019)

The company must have good performance in terms of its operations and in managing its finances and carried out professionally and as much as possible so as not to experience *financial distress* and can avoid the risk of bankruptcy. Bankruptcy according to jurisprudence terminology is *referred to as iflas* (bankruptcy) which means a judge's decision that prohibits a person from acting legally on his property. *Al-taflis* is the debt of a person who spends all his property until nothing is left to him because it is used to pay his debts. Debts that exceed the property owned so as to cause bankruptcy, then detention can be made in the use of the property owned, this is commonly called hajr. The application of hajr is carried out so that the rights of the creditors are maintained, so that the muflus is not allowed to use his property except for basic needs only. Fauzia, I. Y (2017)

The results of research on the prediction of *financial distress* can provide benefits for Islamic banking, namely as an *early warning system* for companies and parties who have interests as one of the preventive efforts in facing the worst possibility that will threaten the sustainability of the company, namely bankruptcy or liquidation. There are two reasons for conducting research in predicting potential bankruptcies. First, the results of the analysis can be used to study the relationship and influence between financial condition and the measurement of financial difficulties. Second, it is to carry out the development of models in predicting bankruptcy. Brahmin, R. K (2007) This research was conducted based on the first reason, namely the results of the analysis can be used to study the relationship and influence between financial conditions and the measurement of financial difficulties that occur in Islamic banking.

Based on the explanation above, this study will analyze the financial ratio to analyze the level of *financial distress* of Islamic Commercial Banks. The financial ratios that will be used by the researchers are *the ratio of Non-Performing Financing* (NPF), *Financing to Deposit Ratio* (FDR) and Operating Cost of Operating Income (BOPO). The conditions can be seen from the following table:

**Table 1.**
**Development of *NPF, FDR, BOPO and ROA* from 2016-2020**

| Year | NPF (%) | FDR (%) | BOPO (%) | ROA (%) |
|---|---|---|---|---|
| 2018 | 3.25% | 78.53% | 89.18% | 1.28% |
| 2019 | 3.32% | 77.91% | 84.45% | 1.73% |
| 2020 | 3.13% | 76.36% | 85.55% | 1.40% |

*Source : www.ojk.go.id processed 2021*

From table 1.1, it can be seen that the internal conditions of Islamic banking have changed from year to year.

*Financing to Deposit Ratio* (FDR) is a ratio used in measuring the level of liquidity of a bank in the return of withdrawals made by depositors by relying on financing that has been channeled as a source of liquidity, namely by dividing the amount of financing provided by the bank to third parties. If the *Financing to Deposit Ratio* (FDR) is higher, the higher the funds disbursed by Islamic banks to third parties. Auliya Rohmah Asri (2020) However, *the Financing to Deposit Ratio* (FDR) rate of Islamic commercial banks in Indonesia from 2018-2020 has decreased successively. In 2018, the *financing to deposit* ratio (FDR) was at 78.53%, but in the following years, namely 2019 and 2020, this ratio experienced successive declines, this indicates that Islamic Commercial Banks in Indonesia experienced a decline in terms of liquidity both before and after the Covid-19 pandemic. This is not in line with the theory that the larger this ratio, the liquidity performance of Islamic banks is in good condition, so this can cause the level of financial distress *(Financial Distress)* of Islamic banks in Indonesia to increase.

Then the ratio that is then used in this study is Operating Costs and Operating Income (BOPO). Operating Costs and Operating Income (BOPO) is a ratio used in measuring the comparison between operating costs or intermediation costs to operating income earned by banks. The smaller the ratio of Operating Costs and Operating Income (BOPO), the better the banking condition. Aditiya Erlangga Nana Nofianti, Tenny Badina (2015) However, this theory is not in accordance with existing data, where the ratio of Operating Costs and Operating Income (BOPO) in 2018-2020 experienced significant ups and downs, but this is not in line with the *level of Non-Performing Financing* (NPF) which decreased from 2018-2020.

*Return On Asset* (ROA) is used in measuring the efficiency and effectiveness of a company in generating profits by optimizing the utilization of its assets. A company with a good level of profitability will show that the company has good performance, therefore the company will be able to maintain the continuity of the company in the long term. Medina Almunawwaroh and Rina Marliana (2018) Therefore, if the *Return On Asset* (ROA) ratio decreases, it will have an impact on declining profits and affect the level of *Financial Distress* or financial difficulties of Islamic Banks. The *Return On Asset* (ROA) rate from 2018-2019 has increased quite well, but in 2020 the *rate of*

*Return On Assets* (ROA) of Islamic Banks in Indonesia has decreased from 1.73% to 1.40% this is because in 2020 Indonesia experienced the Covid-19 pandemic which then impacted all banking activities and income received by banks, this can be seen from the level of *non-performing financing* (NPF) ratio, *Financing to Deposit Ratio* (FDR) and Operating Income Operating Expenses ratio fluctuated.

Research on factors affecting *the condition of Financial Distress* has been carried out by several previous studies, including:

Research conducted by Thoqih Masruri, stated that the *Return On Asset* (ROA) variable has a positive influence on the occurrence of *Financial Distress.* Mahendra Thoqih Masruri *(2020)* Meanwhile, research conducted by Maisaroh et al. stated that the *Return On Asset* (ROA) ratio has no effect on the condition of Islamic Banking *Financial Distress* in Indonesia. Enggar Diah Puspa Arum Maisaroh, Zamzami (2016)

Research conducted by Pamungkas stated that the *Financing to Deposit Ratio* (FDR) variable significantly had no influence on *Financial Distress* in Islamic Commercial Banks for the 2014-2018 period. Dhiwi Rasa Wulan Pamungkas, Fatmi Hadiani, and Radia Purbayati (2021) While the research conducted by Dhefita et al stated that *the Financing to Deposit Ratio* (FDR) in the long term has a significant influence on the risk of *Financial Distress*. Dhefita Sari and Rachma Indrarini (2020)

Theodorus and Artini who in their research used the logistic regression analysis method and stated that Operating Costs and Operating Income (BOPO) can significantly have a positive influence on *predicting financial distress*. Theodorus, S., & Artini, L. G. S (2018) However, the study is contrary to the research conducted by Aminah which uses multiple linear regression analysis and research conducted by Wijaya with a negative regression analysis which states that the ratio of Operating Costs and Operating Income (BOPO) does not have a significant influence on the occurrence of *financial distress*. Wijaya, H. A (2019)

*Trade off theory* discusses the relationship between capital structure and company value. The essence of *trade off theory* in capital structure is to balance the benefits and sacrifices arising from the use of debt. To the extent that the benefits outweigh the sacrifices made, additional debt is still allowed. Meanwhile, if the sacrifice due to the use of debt is already greater, then additional debt is no longer allowed. Based on this theory, the company seeks to maintain a targeted capital structure with the aim of maximizing market value. Nana Umdiana and Hasnifah Claudia (2020)

In general, this theory confirms that if the company wants to increase the value of the company through the *Earnings Per Share* (EPS) indicator, then the financing of additional investment hurus is financed by debt. This happens because of financing with debt, the company can obtain tax savings while maintaining the number of shares outstanding. This situation pushes *Earnings Per Share* (EPS) revenue higher. On the other hand, if the company fails to manage investments which results in the inability to pay interest and principal, then the company's position is on the verge of bankruptcy. If all costs due to financial difficulties are equal to the additional amount of income from tax savings *(taxe shield of debt), then the* company's capital structure is considered optimal. According to this theory, in order to achieve an optimal capital structure, the company *needs to balance the agency cost of financial distress* and *the tax advantage of debt financing.* D.Agus Harjito *(2011)*

*The trade off theory* proposed by Myers states that the company will owe up to a certain level of debt, where *tax savings (tax shields)* from additional debt are equal to the cost of *financial distress.* Myers, Stewart C., R.A. Brealey *(2001)* According to Husnan and Pudjiastuti, *trade off theory* explains that debt use not only benefits but also has its sacrifices. The benefits of using debt come from tax savings due to *the nature of the tax deductibility of interest payment*.. But it can also give rise to bankruptcy costs consisting of *legal fees and distress prices.* The possibility of bankruptcy will be even greater if the company uses increasing debt. The greater the probability of bankruptcy, and the greater the cost of bankruptcy, the more reluctant the company is to use a lot of debt. Husnan, Suad and Enny Pudjiastuti (2015) *Trade Off* theory is used in this study because this theory is closely related to the condition of financial difficulties *(Financial Distress)* experienced by a company, where this research examines these conditions.

Operating Costs to Operating Income (BOPO) is a ratio used to measure the level of efficiency and ability of banks to carry out their operational activities or Operating Costs to Operating Income (BOPO) is the ratio of operating costs in the last 12 months to operating income in the same period. If the smaller the Operating Costs against Operating Income (BOPO), the more efficient the operational costs incurred by the bank concerned. Veithzal Rivai (2013)

This high ratio indicates the amount of operating costs that must be incurred by the bank to obtain operating income. This has led to a decrease in the level of health of Islamic banks. The large operating amount causes the bank's profit to be smaller, because operating costs act as a deduction factor on the income statement. Wulandari, S. (2020)

The determination of the ratio of Operating Costs to Operating Income (BOPO) of Islamic banks is determined as follows:

The efficiency level of Islamic Banking can be measured by the ratio of Operating Costs and Operating Income (BOPO). The lower the ratio of Operating Costs and Operating Income (BOPO), it means that the more efficient the bank will be in controlling its operational costs, with cost efficiency, the greater the profit obtained by the bank. In other words, the smaller the operating ratio, the better, because the bank concerned can cover operating expenses with its operating income.

In shariah, it does not recognize credit *(Loan)* in the distribution of funds it collects. Therefore, the disbursement activities carried out by Islamic banks are more towards *financing.* Muhammad *(2005)* Liquidity calculation using *Financing to Deposit Ratio* (FDR). *The Financing to Deposit Ratio* (FDR) will show the level of the bank's ability to disburse third-party funds raised by the bank concerned. This ratio is used to measure the extent to which borrowed funds are sourced from third-party funds. Mohammed (2000)

*Financing to Deposit Ratio* (FDR) is a ratio used to measure the liquidity of a bank in paying back withdrawals made by depositors by relying on financing provided as a source of liquidity, namely by dividing the amount of financing provided by the bank to Third Party Funds (DPK). The higher *the Financing to Deposit Ratio* (FDR), the higher the funds disbursed to Third Party Funds (DPK). Suryani (2012)

*A high Financing to Deposit Ratio* (FDR) indicates that banks are more aggressive in placing their funds on credit, on the contrary, if the smaller or lower the *Financing to Deposit Ratio* (FDR) it will reduce the bank's profits. If the bank can channel all the funds raised then the bank gets a profit, but if the bank does not channel the funds then the bank also risks losing the opportunity to make a profit. A high *Financing to Deposit Ratio* (FDR) ratio indicates that banks lend almost all of their funds. In other words, the more funds spent on financing, the higher the value *of the Financing to Deposit Ratio* (FDR) and the higher the possibility of risk of non-performing financing.

## 2. METHODOLOGY

This type of research is research that is quantitative in nature. Quantitative is a research method that emphasizes testing theories through measuring research variables with numbers and analyzing data with statistical procedures. Quantitative research requires hypotheses and their testing which will then determine the next stages, such as determining the analytical techniques and statistical formulas to be used. The nature of this study gives more meaning in relation to the interpretation of numbers.

The data used in this study is secondary data that is *time series.* Secondary data is data obtained not directly but through documentation data or official archives, while it is *a time series* meaning data collected from time to time to see the development of events or activities during that period. Data used in research registered with the OJK. The data was obtained from the websites of Bank Indonesia, OJK, and BPS for the period January 2018 to December 2020.

Descriptive statistics are statistics used to analyze data by describing or describing the collected data as it is without intending to make generally accepted conclusions or generalizations. Descriptive statistics include the presentation of data through tables, graphs, pie charts, pictograms, calculations of modes, medians, mean, (measurement of central tendencies), calculation of deciles, percentiles, calculations of data distribution through calculations of averages and standard deviations, as well as percentage calculations. I Made Laut Mertha Jaya (2020)

## 3. RESULTS AND DISCUSSION

### 1) DISCUSSION OF RESEARCH RESULTS

Based on the results of *the independent variable importance* analysis on *the neural network* test, then we will discuss more deeply about the influence of the three input *variables on financial distress.*

**a. Effect of *Financing to Deposit Ratio* (FDR) ratio on *financial distress* level.**

Based on the results of processing variable data *financing to deposit ratio* (FDR) to *Financial Distress* obtained $t_{count}$ of -2.280 < $t_{table}$ of 2.045 with a significance level smaller than the predetermined significance level of 0.030<0.05. This proves that the *Financing to Deposit Ratio (FDR)* variable has a negative and significant effect on *Financial Distress*.

Furthermore, when viewed from the results of *the independent variable importance* analysis, the *Financing to Deposit Ratio* (FDR) variable has an importance value of 11.3% which shows that this variable has a contribution to the level of *financial distress* even though the contribution value is quite small compared to the other two variables in this study. *Financing to Deposit Ratio* (FDR) is a ratio that shows the liquidity of a bank that is the quotient of the funds disbursed and the funds raised. The higher this ratio explains the lower the liquidity of the bank. Therefore, with this high ratio, it will affect the increase in *financial distress* which is a condition where the initial stage of bankruptcy.

The results of this study are supported by research conducted by Dhefita et al. stating that *the Financing to Deposit Ratio* (FDR) in the long term has a significant influence on the risk of *Financial Distress.*

**b. Effect of operating income operating cost (BOPO) ratio to *Financial Distress.***

Based on the results of processing variable data on Operating Costs and Operating Income (BOPO) on *Financial Distress*, $a_{calculation}$ of 3.815 > $t_{table}$ of 2.045 with a significance level smaller than the predetermined significance level of 0.001<0.05. This proves that the variable Operating Costs and Operating Income (BOPO) has a positive and significant effect on *Financial Distress*

The results of the data processing are in accordance with the results of *the independent variable importance* analysis where the variable Operating Cost of Operating Income (BOPO) as a determining model factor for *financial distress* has a contribution of 63.6% of all other predictor variables. This shows that Operating Income Operating Costs (BOPO) contribute to the creation of *a financial distress* prediction model. The positive value in this case can be explained that between Operating Income Operating Costs (BOPO) and *financial distress* has a straight relationship. It can be explained that the higher the Operating Cost of Operating Income (BOPO) followed by the increasing *financial distress.*

This is because Operating Income Operating Costs (BOPO) is a ratio that shows how much operating expenses incurred by the bank to the operating income generated by the bank. Therefore, this high ratio will affect the increased risk *of financial distress* which is a condition where the initial stage of a bankruptcy. With a significant relationship between Operating Costs and Operating Income (BOPO) and *financial distress*, it can be concluded that the *output* ratio of Operating Costs and Operating Income (BOPO) can be used as an *Early Warning System* to prevent *financial distress* at Islamic Commercial Banks.

The results of this study are supported by research by Sofiasani and Gautama who said operating income operating costs (BOPO) have a positive and significant effect on *financial distress*. Gina Sofiasani (2016) However, it is different from research from Rahmania and Hermanto which said that operating income operating expenses (BOPO) have a negative and insignificant effect on the probability of *financial distress.* Meilita Fitri Rahmania and Suwardi Bambang Hermanto *(2014)*

The Operating Income Operating Expenses (BOPO) ratio is used to regulate the comparison between operating costs and bank operating income. If the smaller the Operating Costs against Operating Income (BOPO), the more efficient the operational costs incurred by the bank concerned.

## 4. ACKNOWLEDGMENTS

In this study, many have direct or indirect involvement, so the research team would like to thank the parties who have helped in completing this research so that the results of this research can be maximized.

## 5. CONCLUSIONS

Based on the results of research on factors affecting financial distress by measuring the use of the artificial neural network method in Islamic Banking in Indonesia, it can be concluded that *the Financing to Deposit Ratio (FDR) has a significant negative influence, while for the variable* Operating Costs operating income (BOPO) has a significant positive influence and after being tested together the results show each variable have a positive influence.

## 6. REFERENCES

Almunawwaroh, M., & Marliana, R. (2018). Pengaruh CAR, NPF dan FDR Terhadap Profitabilitas Bank Syariah di Indonesia. *Amwaluna: Jurnal Ekonomi Dan Keuangan Syariah*, *2*(1), 1–17.

Anshori, Abdul Ghofur, (2008). *Kapita Selekta Perbankan Syariah di Indonesia* Yogyakarta: UII Press.

Ascarya, 2015. *Akad & Produk Bank Syariah*, Jakarta : Rajawali Pers.

Asri, A. R. (2020). Pengaruh Financing To Deposit Ratio (FDR). Return On Asset (ROA), Tingkat Suku Bunga Bank Indonesia (BI RATE) dan Infasi Terhadap Margin Murabahah Pada Perbankan Syariah di Indonesia. *Jurnal Ilmiah Mahasiswa FEB, 8*(2).

Brahmana, R. K, (2007). Identifying Financial Distress Condition in Indonesia Manufacture Industry. *Journal Business*, 1–19.

Dendawijaya, Lukman, (2009). *Manajemen Perbankan*. Jakarta : Ghalia Indonesia.

Fauzia, I.Y, (2017). Mendeteksi Kebangkrutan Secara Dini Perspektif Ekonomi Islam. *Ekuitas (Jurnal Ekonomi dan Keuangan)*, 19(1).

Harjito, D.Agus. (2011). Teori Pecking Order dan Trade Off Dalam Analisis Struktur Modal di Bursa Efek Indonesia, *" Jurnal Siasat Bisnis"*, Vol. 15 No. 2.

Husnan, Suad dan Enny Pudjiastuti. (2015). *Dasar-dasar Manajemen Keuangan.* (Edisi Ketujuh, Cetakan Pertama). Yogyakarta: UPP STIM YKPN.

Maisaroh, Zamzami, E. D. P. A. (2018). Analisis Rasio Keuangan untuk Memprediksi Kondisi Financial Distress Perbankan Syariah di Indonesia (Studi Kasus Pada Bank Syariah di Indonesia Periode 2011-2016). *Jurnal Akuntansi & Keuangan Unja*, *3*(4), 19–34.

Made, I Laut Mertha Jaya, (2020). *Metode Penelitian Kuantitatif dan Kualitatif: Teori, Penerapan, dan Riset Nyata,* (Yogyakarta: Anak Hebat Indonesia).

Muhammad, (2005). *Manajemen Dana Bank Syariah*, ( Yogyakarta : Ekonosia).

Muhammad, (2000). *Sistem dan Prosedur Operasional Bank Syariah.* (Yogyakarta : UII pres).

Myers, Stewart C., R.A. Brealey. (2001). Fundamentals of Corporate Finance (3 rdEdition), Singapore : Mc Graw – Hill.

Nana Nofianti, Tenny Badina, A. E. (2015). Analisis Pengaruh Return On Asset (ROA), Biaya Operasional Terhadap Pendapatan Operasional (BOPO), Suku Bunga, Financing To Deposits Ratio

Rahmania, Meilita Fitri dan Suwardi Bambang Hermanto. (2014). "Analisis Rasio Keuangan Terhadap Financial Distress Perusahaan Perbankan Studi Empiris di BEI 2010-2012". *Jurnal Ilmu & Riset Akuntasi*.Vol. 3, No. 11.

Rivai, Veithzal, (2013). *Credit Management Handbook: Manajemen Perkreditan Cara-Cara Mudah Menganalisis Kredit.* Jakarta: PT. Rajagrafindo Persada.

Sari, D., & Indrarini, R. (2020). Pengaruh Rasio Keuangan Terhadap Resiko Financial Distress Perbankan Syariah di Indonesia Dengan Pendekatan Bankometer. *Jurnal Ilmiah Ekonomi Islam*, *6*(3), 557–570.

Sofiasani, Gina dan Budhi Pamungkas Gautama. (2016). "Pengaruh CAMEL Terhadap Financial Distress Pada Sektor Perbankan Indonesia Periode 2009-2013". *Journal of Bussines Management and Enterpreneurship Education*". Vol. 1, No. 1.

Sugiyono, (2014). *Metode Penelitian Bisnis (Pendekatan Kuantitatif, Kualitatif, dan R&D).* Bandung : Alfabeta.

Suryani. (2012). Analisis Pengaruh Financing to Deposit Ratio (FDR) Terhadap Profitabilitas Perbankan Syariah di Indonesia (Rasio Keuangan pada BUS dan UUS Periode 2008-2010). *Economica*, *2*(2), 153–174.

Thoqih Masruri, M. (2020). Analisis Pengaruh ROA, FDR, BOPO Terhadap Financial Distress (Studi Kasus pada Bank Muamalat Indonesia periode 2001-2019). *Ilmiah*, *9*(1), 9.

Umdiana, Nana and Hasnifah Claudia, (2020). Analisis Struktur Modal BerdasarkanTrade Off Theory, *"Jurnal Akuntansi : Kajian Ilmiah Akuntansi"*. Vol. 7 No.1.

Wulandari, S. (2020). Analisis Pengaruh Capital Adequacy Ratio (Car), Financing Deposit Ratio (Fdr), Non Performing Financing (Npf), Biaya Operasional Pendapatan Operasional (Bopo), Dan Profitabilitas (Roa) Terhadap Financial Distress.( IAIN SALATIGA).