# THE EFFECTS OF FINANCIAL PERFORMANCE AND MACROECONOMICS ON FINANCIAL DISTRESS IN THE ENERGY SECTOR BEFORE AND DURING COVID-19 PANDEMIC

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**Abstract:** The condition of financial distress is where the company's finances are in a bad condition which then becomes an early indicator of bankruptcy for companies to anticipate or restructure so that companies do not experience bankruptcy and liquidation. This study aims to analyze the influence of financial ratios and macroeconomic performance (interest rates, economic growth, and covid-19) on financial distress before and during the Covid-19 pandemic in energy companies listed on the Indonesia Stock Exchange for the period 2017–2021. The data analysis technique is panel data regression analysis using EViews 12. The population in this study is companies in the energy sector listed on the IDX. The results showed that the condition of financial distress during the pandemic was generally higher than before the Covid-19 pandemic. The results of the analysis conducted in 2017-2021 show that as many as 12 out of 53 companies in the mining sector are experiencing financial distress. A total sample of 12.83% indicated financial distress. Financial ratios and macroeconomic performance (interest rates, economic growth, and covid-19) simultaneously influence financial distress. Partially profitability, liquidity, leverage, and sales growth affect financial distress, while activity, cash flow from the operation, interest rates, economic growth, and covid-19 do not affect financial distress.

**Keywords:** financial distress, financial ratios, macroeconomic performance, probit model

*Abstrak: Kondisi financial distress merupakan kondisi dimana keuangan perusahaan dalam keadaan tidak baik yang kemudian menjadi indikator awal terjadinya kebangkrutan atau sebagai early warning system bagi perusahaan untuk melakukan antisipasi atau restrukturisasi agar perusahaan tidak mengalami kebangkrutan dan likuidasi. Penelitian ini bertujuan untuk menganalisis pengaruh kinerja keuangan dan kinerja makroekonomi (suku bunga, pertumbuhan ekonomi, dan covid-19) terhadap financial distress pada masa sebelum dan selama pandemi Covid-19 pada perusahaan energi yang terdaftar di Bursa Efek Indonesia periode 2017 – 2021. Teknik analisis data yang digunakan yaitu analisis regresi data panel dengan menggunakan bantuan EViews 12. Populasi dalam penelitian ini adalah perusahaan-perusahaan di sektor energi yang terdaftar di BEI. Hasil penelitian menunjukkan bahwa kondisi financial distress saat pandemi secara umum lebih tinggi dibandingkan sebelum pandemi Covid-19. Hasil analisis yang dilakukan di tahun 2017-2021 menunjukkan bahwa terdapat sebanyak 12 dari 53 perusahaan pada sektor pertambangan yang mengalami kondisi financial distress. Dari total sampel sebanyak 12,83% terindikasi financial distress. Secara simultan kinerja keuangan dan kinerja makroekonomi (suku bunga, pertumbuhan ekonomi, dan covid-19) berpengaruh terhadap financial distress. Secara parsial profitabilitas, likuiditas, leverage dan pertumbuhan penjualan berpengaruh terhadap financial distress, sedangkan aktivitas, arus kas dari operasi, suku bunga, pertumbuhan ekonomi, dan covid-19 tidak berpengaruh terhadap financial distress.*

*Kata kunci: financial distress, kinerja keuangan, kinerja makroekonomi, model probit*

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## INTRODUCTION

The company's inability to manage and maintain financial performance stability can cause financial distress so that the company suffers losses. Financial distress is a condition where the company's finances are not good which then becomes an early indicator of bankruptcy or an early warning system for companies to anticipate or restructure so that the company did not experience bankruptcy and liquidation (Ardi et al. 2020; Ashraf et al. 2019). Financial distress can be predicted by observing a company's financial performance by analyzing financial ratios in financial reports (Suidarma et al. 2022; Pratiwi et al. 2019; Restianti & Agustina, 2018) financial ratios can describe conditions in the past, present, and future as indicators that are useful for estimating the survival of a company or the level of bankruptcy of a company. There are also external factors that can affect financial distress which has a wider scope, macroeconomic conditions, such as economic growth that experiences inflation as well as policies to increase loan interest rates which cause the interest burden that must be borne by companies to increase so that this will affect the financial condition of the company (Kristianti in Wangsih et al. 2021; Putri, 2022).

In Indonesia, the phenomenon of financial distress occurs in several energy companies. The energy sector has an important role in the Indonesian economy.

Based on data from IHS Markit, Indonesia is predicted to remain the largest exporter of coal until 2050. Figure 1 shows that Indonesia is a country which is the third largest contributor to coal production in the world after China and India. According to data from the Ministry of Energy and Mineral Resources, coal production in Indonesia will reach 562.5 million tonnes in 2020.

After the Covid-19 pandemic, the energy sector's GDP decreased compared to the energy sector's GDP contribution to the National GDP in previous years. According to the Agency for the Assessment and Application of Technology, the policy of limiting social interaction causes a decrease in industrial activity, especially in the service industry, as well as disruption to supply chains, including energy supply and demand, as well as disruption to global trade.

After the Covid-19 pandemic, the energy sector's GDP decreased compared to the energy sector's GDP contribution to the National GDP in previous years. It can be seen in Figure 2 which shows a graph of GDP in the energy sector from 2010-2021.

The sectors that were most affected by the global crisis were sectors that relied on external demand (tradable), energy sector relied on exports so that increasing costs would reduce company profits so that if this could not be anticipated it would lead to financial distress.
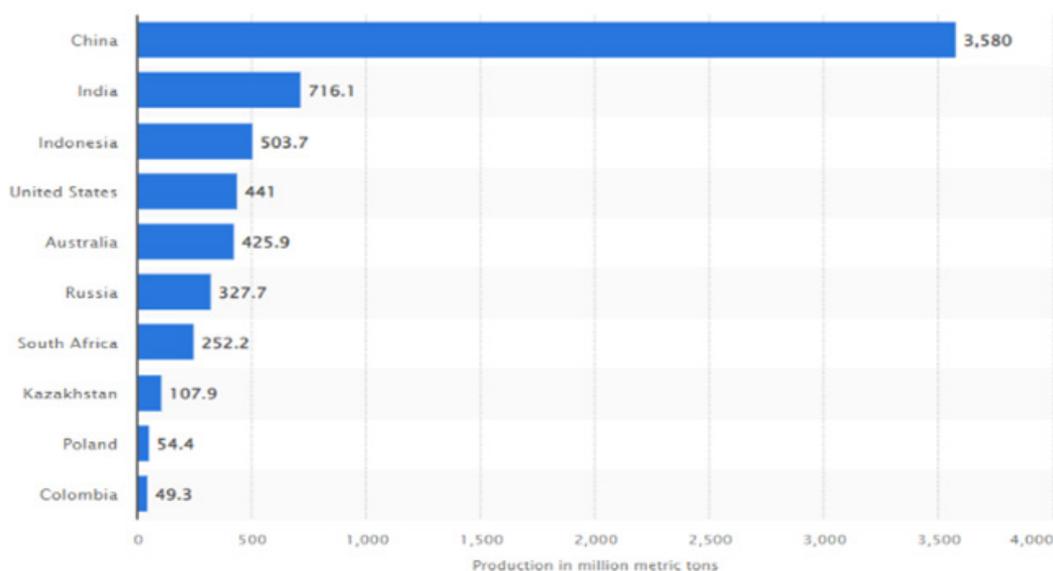


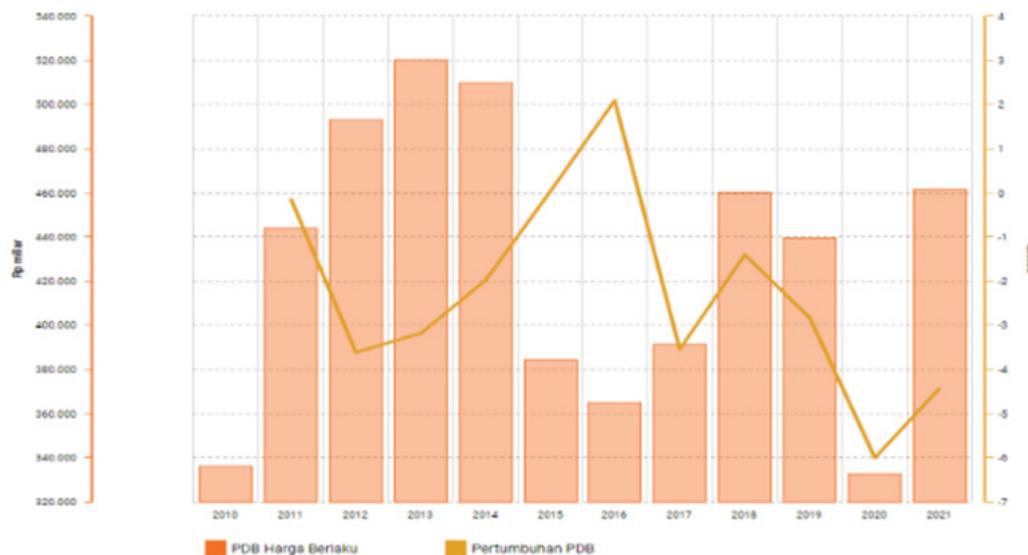Figure 1. The world's largest coal-producing country (Statista.com, 2022)

Figure 2. GDP of the energy sector (Katadata.co.id, 2022)

The amount of debt a company has is also a factor in the occurrence of financial distress in the company (Nurhayati, 2021), companies that experience difficulties in fulfilling their obligations to debtors and failure or inability to pay debts are also factors in the occurrence of financial distress in companies (Permana & Serly, 2021; Pratiwi et al. 2019). The impact of the Covid-19 pandemic can be seen in the increase in the non-performing loan (NPL) ratio in almost all sectors, the energy sector is the sector with the highest non-performing loan ratio compared to other sectors which is also above the national NPL.

By sector, NPL in mining rise to 5.8% in the second quarter of 2021 compared to December 2019 which was 3.58%. Based on data from Bank Indonesia, the national banking gross NPL was 3.24% in the second quarter of 2021. This number has increased compared to December 2019 or before the Covid-19 pandemic which was 2.53% (katadata.co.id 2022).

In general, the energy sector makes a large contribution to the formation of the Gross Domestic Product (GDP). However, the occurrence of the global financial crisis has made it possible for companies in this sector to experience financial difficulties, making it difficult to maintain sustainability. Over the last five years there have been five companies in the energy sector that had to be delisted from the Indonesia Stock Exchange (Table 2).

The impact of these financial difficulties caused companies in this sector to be delisted from the Indonesia Stock Exchange (Nurhayati, 2021; Rabbani, 2022). There have been five companies in the last five years in the energy sector that have declared delisting from the Indonesia Stock Exchange, this is a sign that companies in the sector are experiencing financial difficulties.

By predicting the possibility of bankruptcy earlier through the Zmijewski model, the company can anticipate in maintaining its financial position. Also by comparing conditions before and during the pandemic, the company can describe the company's condition when a crisis such as the Covid-19 pandemic reoccurs. In previous studies, there were several similarities, where the research predicting about financial distress and uses the probit Zmijewski model as a method for calculating financial distress. The thing that makes this difference as an update of this research lies in the focus on the pandemic covid-19, this research compares the state of companies in the energy sector before and during covid 19 pandemic. In this research objectives to be achieved: (1) Analyzing financial distress before and during the Covid-19 pandemic in energy companies listed on the Indonesia Stock Exchange, (2) Analyzing the effect of financial and macroeconomic performance on financial distress before and during the Covid-19 pandemic in energy companies listed on the Indonesia Stock Exchange.

Table 1. The ratio of non-performing loans (NPL) to banks by sector

| Name | Quarter IV-2019/Percent | Quarter II-2021/Percent |
|---|---|---|
| Mining | 3.58 | 5.8 |
| Industry | 3.88 | 5.33 |
| Trade | 3.66 | 4.5 |
| Construction | 3.55 | 3.52 |
| National | 2.53 | 3.24 |
| Transportation | 1.64 | 2.42 |
| Services | 1.43 | 2.35 |
| Agricultural | 1.66 | 2.28 |
| Social | 1.5 | 2.03 |
| Others | 1.6 | 1.92 |
| Electricity;gas;water | 0.89 | 1.19 |

Source: Katadata.co.id 2022

Table 2. Energy sector delisting companies

| Stock Code | Company Name |
|---|---|
| BRAU | Berau Coal Energy Tbk |
| ATPK | Bara Jaya Internasional Tbk |
| BORN | Borneo Lumbung Energi dan Metal Tbk |
| CKRA | Cakra Mineral Tbk |
| TKGA | Permata Prima Sakti Tbk (Toko Gunung Agung) |

Source: Indonesia Stock Exchange (2022)

## METHODS

The data used is a secondary data type. The secondary data used is data from the financial statements of the energy companies to be studied as well as other sources that support and can provide information about the data needed from the companies to be studied. Other secondary data aside from data from BPS and BI for interest rate values as well as economic growth data originating from BPS.

The type of data used in this study is panel data. Panel data consists of time series data and cross-sections. The data collection technique used in this study is purposive sampling. The data of energy companies used in this study are data from the financial reports of 53 energy companies. The data period used in this study is financial report data from 2017 – 2021, the total data is 265 samples. The analysis is done from 2022 until early 2023 in Jakarta because the collecting data step is done online.

This study's data analysis technique used quantitative analysis using descriptive analysis methods and panel data regression analysis. To analyze the data, researchers used the help of the EViews 12 software. Panel regression is used to relate and see the effect of financial performance, interest rates, and macroeconomics on financial distress. There are three approaches to the panel data regression model estimation method: the common effect model, the fixed effect model, and the random effect model.

Next, the classical assumption test will be carried out to ensure that the regression model must be BLUE (Best Linear Unbiased Estimate). The classical assumption testing that will be carried out consists of the multicollinearity test and the heteroscedasticity test. In this study, hypothesis testing aims to comprehensively understand the relationship between the independent and dependent variables. The hypothesis testing carried out in this study was the coefficient of determination test, simultaneous test (F-test), and partial test (T-test). The models used in analyzing the effect of financial performance, interest rates, and macroeconomics on financial distress are:

$$FD_{it} = a - \beta_1 ROA_{it} - \beta_2 CR_{it} + \beta_3 DAR_{it} - \beta_4 TATO_{it} + \beta_5 CFO_{it} - \beta_6 SALES_{it} + \beta_7 SBI_{it} - \beta_8 PDB_{it} + \beta_9 COVID_{it} + e$$

information: $FD_{it}$ (Financial distress); $ROA_{it}$ (Profitability ratio); $CR_{it}$ (Liquidity ratio); $DAR_{it}$ (Solvability/leverage ratio); $TATO_{it}$ (Activity ratio); $CFO_{it}$ (Cash Flow from Operation); $SALES_{it}$ (Sales growth); $SBI_{it}$ (Interest rate); $PDB_{it}$ (Economic growth); $COVID_{it}$ (Pandemic Covid-19); $\beta$ (Regression coefficient); a (Constanta); e (Error).

Prediction of financial distress is very important as an early detection step so that both companies and investors can find out the possibility of a company bankruptcy in the future it is also useful for companies to evaluate the company's financial condition and be able to think about the right steps as soon as possible to avoid bankruptcy. The nature of the energy demand is derived from demand, they follow the development of activities (industry, transportation, offices, etc.) where energy plays a role in moving it.

Prediction of financial distress is very important as an early detection step so that both companies and investors can find out the possibility of a company bankruptcy in the future it is also useful for companies to evaluate the company's financial condition and be able to think about the right steps as soon as possible to avoid bankruptcy. The nature of the energy demand is derived from demand, they follow the development of activities (industry, transportation, offices, etc.) where energy plays a role in moving it. Because the energy sector is directly related to the transportation sector which has experienced the steepest decline during the pandemic covid-19 (BPPT, 2020) then the energy sector is also impacted. This study aims to analyze the effect of financial performance, cash flow from operating activities, sales growth and interest rates, economic growth, and Covid-19 on the financial distress of energy companies listed on the Indonesia Stock Exchange.

## RESULTS

The energy sector includes companies that sell products and services related to energy generation, including non-renewable energy (fossil fuels). Based on the classification of the Indonesian Stock Exchange, as of 2021, there are 71 companies in the energy sector (IDX 2021) listed on the Indonesia Stock Exchange. However, 18 companies did not have complete sample selection criteria during the observation period, so the number of samples used in this study was 53 companies, so there were 265 research samples.

Financial distress is indicated by the Zm value, if the Zm value is greater than or equal to 0.5, the company is predicted to experience financial distress. Conversely, companies with a Zm value smaller than the prediction of 0.5 do not experience financial distress (Sudarman et al. 2020; Ashraf et al. 2019). The following companies are indicated as financial distress in the research (Table 3).

Based on the analysis, there are 12 out of 53 companies in the energy sector are indicated to be experiencing financial distress. Out of a total sample of 12.83%, there were indications of financial distress consisting of four sub-sectors, namely mining, oil, gas, and coal storage distribution, as well as trading, services and energy investment, and basic and chemical industries.

Figure 4, Percentage of financial distress in sub-sectors Five companies in the mining subsector indicated financial distress, namely Apexindo Pratama Duta Tbk (APEX), Ratu Prabu Energi Tbk (ARTI), Borneo Olah Sarana Sukses Tbk (BOSS), Energi Mega Persada Tbk (ENRG), and SMR Utama Tbk (SMRU). When viewed from the financial conditions of the five coal sub-sector companies, they have similar financial conditions, they have small or even minus profitability values, minus sales growth values except for APEX 2018, BOSS 2017, and SMRU 2021, liquidity value is less than 1, leverage value high, the value of the activity ratio and CFO is small.

Table 3. Energy companies with indications of financial distress

| Code | Company Name |
| --- | --- |
| APEX | Apexindo Pratama Duta Tbk |
| ARTI | Ratu Prabu Energi Tbk |
| BBRM | Pelayaran Nasional Bina Buana Raya Tbk |
| BOSS | Borneo Olah Sarana Sukses Tbk |
| BULL | Buana Lintas Lautan Tbk |
| CANI | Capitol Nusantara Indonesia Tbk |
| CNKO | Exploitasi Energi Indonesia Tbk |
| DWGL | Dwi Guna Laksana Tbk |
| ENRG | Energi Mega Persada Tbk |
| LEAD | Logindo Samudramakmur Tbk |
| SMRU | SMR Utama Tbk |
| ETWA | Eterindo Wahanatama Tbk |
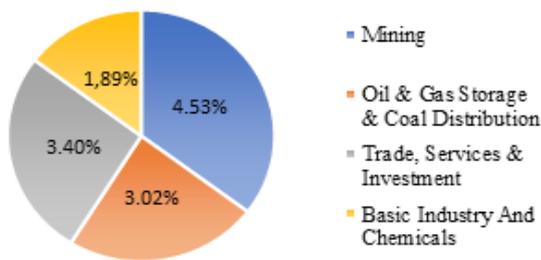
Figure 4. Percentage of financial distress in sub-sectors

In the oil & gas storage & coal distribution subsector, four companies indicated financial distress, which are Pelayaran Nasional Bina Buana Raya Tbk (BBRM), Buana Lintas Lautan Tbk (BULL), Capitol Nusantara Indonesia Tbk (CANI), and Logindo Samudramakmur Tbk (LEAD). The sectors most affected by the global crisis are those that rely on external demand (tradable) and one of the commodities affected by the cessation of economic activity is energy commodities because they are directly related to the transportation sector which has experienced the steepest decline (BPPT, 2020). BBRM, CANI, and BULL indicated financial distress during the covid-19 pandemic, namely the period of 2020 and 2021, the listed companies are included in the transportation service companies that support the energy sector. While LEAD indicated financial distress in 2018, this happens because the company has assets that are not productive and efficient to use, so the company cannot utilize assets and convert them into incoming cash.

Two companies in the trade, services & investment subsector indicated financial distress, Exploitasi Energi Indonesia Tbk (CNKO) and Dwi Guna Laksana Tbk (DWGL). During the research period (2017-2021) CNKO indicated financial distress for five years, based on the condition of the shares, the value does not move or is often referred to as dormant shares, besides the poor financial performance, CNKO also experienced technical problems which hindered the production process. In addition, there was a change in management due to the dismissal of the board of commissioners and directors. DWGL indicated financial distress in 2017-2020, the company's financial performance improved during the covid-19 pandemic this occurred due to increased energy demand, the company also recorded profits during the Covid period, namely in 2020 and 2021.In the basic industry and chemicals subsector, Eterindo Wahanatama Tbk (ETWA), indicated financial distress, ETWA consistently has a negative profitability

value during 2017-2021, besides that ETWA is indicated as financial distress during the research period.

In addition to having poor financial performance, companies that are in financial distress have also been subject to sanctions from the IDX for being late in submitting their financial reports so the IDX carried out a temporary suspension of trading (suspension) on several stock issuers who committed the infraction and this can lead the company to bankruptcy as well as delisting from the Indonesian stock exchange. Three companies in this energy sector indicated financial distress during the 2017-2021 research period (Table 4).

Besides having poor financial performance, three companies which are Capitol Nusantara Indonesia Tbk (CANI), Exploitasi Energi Indonesia Tbk (CNKO), and Eterindo Wahanatama Tbk (ETWA) indicated financial distress for five years, namely 2017-2021, these companies also had special notations on the stock exchange, notation E (financial reports showing negative equity), notation X (equity securities under special monitoring), also notation S (last financial report shows no operating income). In addition, the Indonesia Stock Exchange (IDX) has also temporarily suspended trading or suspended shares.

The value of financial distress was higher during a pandemic which illustrated that the company was getting closer to a state of financial distress, based on Figure 5, a significant difference was found in the value of liquidity, the value of liquidity was higher during a pandemic than before the pandemic. This can be explained by the company's ability to pay off long-term obligations in short, through higher current assets during the Covid-19 pandemic, companies can take advantage of credit restructuring policies, namely reducing interest rates, extending the term of payment (Term of Payment), reducing principal arrears, adding credit/financing facilities, and converting credit/financing into equity. Temporary Capital (OJK Regulation No. 11/POJK.03/2020). Then there is profitability that is shown to be not much different, this means that companies can take advantage of the use of their assets to generate maximum profits, energy demand will also increase sharply in 2021 so companies can take advantage of opportunities to take maximum profits and restore conditions due to the impact of the Covid-19 pandemic.

Table 4. Companies that consistently experience financial distress

| Code | CANI | CNKO | ETWA |
|---|---|---|---|
| Subsector | Coal Distribution | Coal Distribution | Alternative Fuels |
| 2017 | 2.09339 | 3.10724 | 2.15204 |
| 2018 | 2.53993 | 5.12841 | 3.25056 |
| 2019 | 5.91180 | 3.38082 | 3.45041 |
| 2020 | 6.58836 | 8.30964 | 2.47464 |
| 2021 | 8.11168 | 7.38663 | 2.49489 |

Indonesia's economic structure is unlikely to experience significant changes in 2017-2021. Indonesia's economic growth remains strong amidst a global economic slowdown. Also, Indonesia's economic development shows an increasingly positive improvement trend amidst the global economy's uncertainty. The better quality of growth is marked by a decrease in the poverty rate, and the unemployment rate (Kholisoh, 2020). The GDP value showed an increase in 2017-2019 then in 2020 it experienced a decline due to the Covid-19 pandemic which resulted in a slowdown in the national economy. The following is a graph of GDP growth from 2017-2021 (Figure 6).

In 2020, the GDP value decreased, this occurred because of the Covid-19 pandemic, but the decrease that occurred was not significant, 2019 Indonesia's GDP was 10.949.155,40, and in 2020 it decreased to 10.722.999, then in 2021 there was a significant increase in economic growth and GDP value reached 11.120,078 it is supported with good handling of the pandemic by the government, the government Indonesia has a strategic role in driving the acceleration and effectiveness of national economic recovery (Fadila, 2021). Besides Indonesia's main export commodities such as coal, palm oil (crude palm oil/CPO), and crude oil also experienced price increases, increasing state revenues from taxes and non-taxes so that Indonesia benefits through high energy prices.

In addition to economic growth, Indonesia's interest rate in 2020 also fall and continue to fall until 2021. The cut in the benchmark interest rate is in response to the monetary authority's response to economic conditions affected by the Covid-19 pandemic. It is noted that BI has cut interest rates 5 times or by 125 basis points (bps) in 2020. The following is a graph of Indonesia's interest rates from 2017-2021 (Figure 7).

Interest rates continued to rise from 2017-2019 then when the covid-19 pandemic occurred, interest rates decreased to a value of 4,25 and continued to fall in 2021 with a value of 3,52. During the Covid-19 pandemic, the government lowered interest rates to ease the burden on companies and boost the economy's productivity (Dini et al. 2023). The decision to reduce interest rates was taken to restore the deteriorating economy which experienced a contraction caused by the Covid-19 pandemic.

Based on the results of panel data regression analysis with the tool of EViews 12 software the selection of the appropriate regression model after testing (Chow test and Hausman test) is the random effect model from several panel data regression models that can be used, which are the common effect model, fixed effect model, and random effect model. The following are the results of random effect testing using the EViews 12 software (Table 5).

Based on Table 5 it can be concluded that the panel data regression equation is as follows:

FINANCIAL DISTRESS = -3.66 - 3.18 ROA - 0.06 CR + 5,94 DAR + 0.003 TATO - 0.37 CFO - 0.04 SALE + 0.002 SBI - 5.65E-08 PDB + 0.10 COV

On the results of the classical assumption test, the multicollinearity test value does not have a correlation coefficient value > 0.90, it can be concluded that there is no multicollinearity problem in the study. Likewise, with the heteroscedasticity test, the data graph does not form a certain pattern, so there is no heteroscedasticity problem. Furthermore, testing the hypothesis in this study uses simultaneous hypothesis testing (F test) and partial hypothesis testing (T-test), and the coefficient of determination.
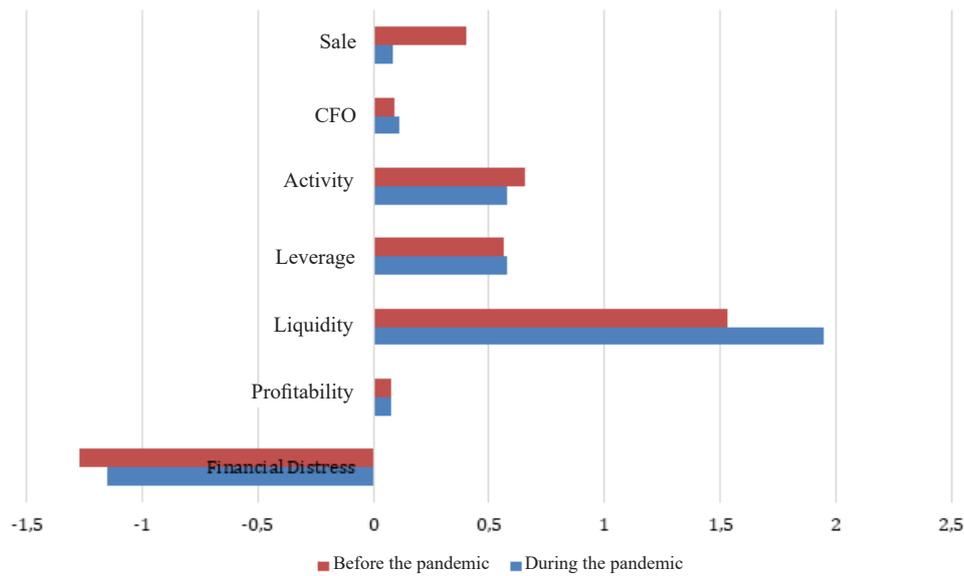
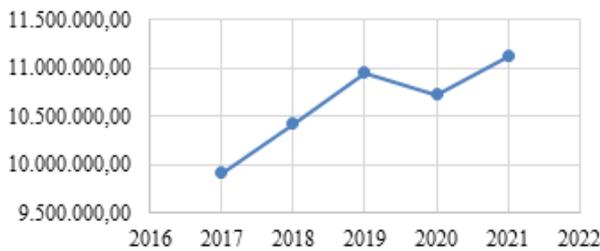Figure 5. Variable conditions before and during the pandemic
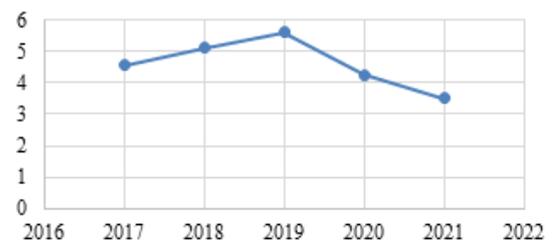


Figure 6. Product domestic bruto



Figure 7. Indonesian interest rates

Table 5. Result of panel regression random effect model

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -3.662430 | 0.664366 | -5.512666 | 0.0000 |
| ROA | -3.189779 | 0.290057 | -10.99709 | 0.0000 |
| CR | -0.065498 | 0.019510 | -3.357092 | 0.0009 |
| DAR | 5.940094 | 0.109272 | 54.36055 | 0.0000 |
| TATO | 0.003751 | 0.072511 | 0.051735 | 0.9588 |
| CFO | -0.374031 | 0.331911 | -1.126901 | 0.2608 |
| SALE | -0.044712 | 0.021237 | -2.105376 | 0.0362 |
| SBI | 0.002668 | 0.066319 | 0.040225 | 0.9679 |
| PDB | -5.65E-08 | 7.62E-08 | -0.741158 | 0.4593 |
| COV | 0.104546 | 0.116590 | 0.896695 | 0.3707 |
| Weighted Statistics | | | | |
| Root MSE | 0.350219 | R-squared | 0.953106 | |
| Mean dependent var | -0.823899 | Adjusted R-squared | 0.951451 | |
| S.D. dependent var | 1.620326 | S.E. of regression | 0.357020 | |
| Sum squared resid | 32.50319 | F-statistic | 575.8662 | |
| Durbin-Watson stat | 1.960338 | Prob(F-statistic) | 0.000000 | |
| Unweighted Statistics | | | | |
| R-squared | 0.968030 | Mean dependent var | -1.222127 | |
| Sum squared resid | 40.52114 | Durbin-Watson stat | 1.572445 | |

Based on Table 6, The coefficient of determination is used to determine how much the independent (independent) variable affects the dependent (dependent) variable. Adjusted R-squared value of 95.1451% which explains that the independent variables of profitability, liquidity, solvency/leverage, activity, cash flow, sales growth, interest rates, and economic growth can explain the dependent variable, while the remaining 4.8549% is explained by other variables. The Prob (F-statistic) value is lower than the significance level of $0.00 < 0.05$. Then it can be stated that the independent variables in this study, which are profitability, liquidity, solvency/leverage, activity, cash flow, sales growth, interest rates, economic growth, Covid-19 simultaneously affect the dependent variable financial distress in registered energy companies on the Indonesia Stock Exchange (IDX) for the 2017-2021 period. Based on the result, the probability (T-statistic), if the probability value is $(<)\ 0.05$, it can be stated that the independent variable affects financial distress. Based on the results of the regression analysis using a random effect model, the results of the probability (T-statistics) can be described as follows:

a. Profitability has a probability value of $0.00 < 0.05$, it can be concluded that profitability as a proxy for ROA (Return on Assets) affects financial distress. The high value of profitability indicates that the company has been able to use its assets to generate large profits to avoid bankruptcy. In line with the research conducted by Dirman (2020) that revealed the lower the profitability, the closer the company will experience financial distress. Companies that have low profitability ratios will have a signal that the company cannot turn incoming cash into profit.

b. Liquidity has a probability value of $0.0009 < 0.05$, it can be concluded that liquidity proxied by CR (Current Ratio) affects financial distress. It can be concluded that the company is capable utilize current assets to become liquid so that the company can pay its short-term obligations. This result confirms the findings of previous studies reported by Lumbantobing (2019) which showed that the larger current assets owned company is more expected to reduce the possibility of financial distress of the company.

c. Leverage has a probability value of $0.0009 < 0.05$, it can be concluded that leverage proxied by DAR (Debt to Asset Ratio) affects financial distress. The higher the DAR value owned by the company means that the company has more debt and there is potential for the company to be unable to pay the debt and

result in default which triggers financial distress. The results confirm the findings of Lumbantobing (2019) which states that the higher the debt, the closer the company is to financial distress.

d. Activity has a probability value of $0.9588 > 0.05$, it can be concluded that the activity ratio proxied by TATO (Total Asset Turnover) does not affect financial distress. The activity ratio describes optimal asset management so that the company can generate maximum sales and profitable profits. However, high sales are not only obtained from the utilization of the assets themselves. If the costs incurred by the company cannot be controlled, it will result in erratic annual net sales so the profits generated are also erratic and can result in losses. If the company experiences losses from year to year, the company may experience financial distress. This result confirms the findings of previous studies reported by Aisyah et al. (2017) dan Restianti & Agustina (2018) which states that TATO does not affect financial distress, companies that are unable to carry out cost efficiency in every sale, meaning that both the total asset turnover value is large or small can experience financial distress.

e. Cash flow from the operation has a probability value of $0.2608 > 0.05$, it can be concluded that the cash flow from the operation does not affect financial distress. The high value of cash flows from operating activities does not necessarily mean that the company can pay its obligations to creditors. Even though the value of operating cash flow is high, it is followed by expenses from operational activities such as payment of raw materials, large tax payments do not necessarily make the company can avoid financial distress. This result confirms the findings of previous studies reported by Novitasari (2023) which state that cash flow from operating activities does not affect financial distress.

f. Sales growth has a probability value of $0.0362 < 0.05$, it can be concluded that sales growth affects financial distress. High sales reflect that the company is in good condition because it can be stated that high sales will also generate high profits so that financial distress can be avoided. Based on signal theory, the higher the sales obtained will give a positive signal to external parties such as creditors because the company can pay its obligations and investors because the injection of funds is successful in the company. The results of this study are consistent with research by Elviana & Ali (2022) and Putri (2021) which revealed that sales growth has an

impact on financial distress.

g. Interest rate has a probability value of $0.9679 > 0.05$, it can be concluded that interest rate does not affect financial distress. Changes in interest rates when viewed from an investor's point of view are more likely to be used to control inflation and exchange rates (Ningsih et al. 2021). In line with the research conducted by Dini et al. (2023) and Ningsih et al. (2021) which states that interest rates have no effect on financial distress in a company.

h. Economic growth has a probability value of $0.4593 > 0.05$, it can be concluded that economic growth proxied by GDP (Growth Domestic Product) does not affect financial distress. Indonesia benefited from high energy prices so that the condition of companies in the energy sector is not affected by good or bad economic growth. So that economic growth cannot be used as a measure of a company in assessing the condition of a company experiencing financial distress. This is in line with Ceylan (2021) which states that economic growth does not affect financial distress.

i. Covid-19 has a probability value of $0.3707 > 0.05$, so it can be concluded that Covid-19 does not affect financial distress. This happened because there was good handling of the pandemic by the government, the Indonesian government has a strategic role in encouraging the acceleration and effectiveness of national economic recovery. In addition, in the energy sector, there was an increase in commodity prices during the pandemic, the increase in prices was driven by stronger demand amid efforts to recover from the pandemic and ongoing supply chain disruptions.

Based on the results of panel data regression analysis using the random effect model, shows that the variables of profitability and leverage are the variables that most influence financial distress, then followed by the variables of liquidity and sales growth which influence financial distress. The following is the probability value for each variable in the study (Figure 6).

Before it is called financial distress, there are four stages a company goes through, namely deterioration of performance, failure, insolvency, and default. The first two stages are the cause of the profitability problem and the final two stages are the cause of the liquidity problem. This supports the definition of financial distress which is defined as the company's inability to fulfill its obligations, financial difficulties are limited to companies that have constraints in funding from external parties, difficulties in funding operational costs, and the company's ability to generate profits. Therefore, what is the focus of the cause of financial distress is how much a company's debt is and how capable the company is of making profits.

**Managerial Implication**

Companies that want to protect themselves and avoid financial distress must be able to use and manage total assets properly to increase sales so that profit margins can increase. The company must be able to manage all of its assets to be able to cover all of its debts. it is also necessary to manage the debt so that it is not too large. The company must also maintain high sales because it reflects the company is in good condition. After all, high sales will generate high profits as well to avoid financial distress. if the company has indications of financial distress the company can process bank debt restructuring to strengthen the capital structure and improve the overall cash position, as well as carry out cost efficiency.



Figure 6. Probability regression analysis results

The investor must be able to indicate a company with poor financial performance, the company can see it from financial ratios or stock movements. Poor financial performance will have an impact on the value of the company's shares, either the share value continues to decline or the company has immovable shares so that investors are not trapped in bad investments.

This will also be in line with the government's regulations, especially Financial Services Authority (OJK) can review the regulations regarding delisted shares as well as dormant shares on the stock market. The Indonesian Stock Exchange and the Financial Services Authority as authorities in the capital market cannot allow these dormant shares to become a market risk, it is necessary to take preventive steps to protect investors and make rules regarding the protection of investors in the capital market.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

The condition of financial distress during the pandemic was generally higher than before the Covid-19 pandemic. This can be explained by the policy of Large-Scale Social Restrictions (PSBB) which caused a slowdown in the global economy resulting in a weak financial position. The results of the analysis conducted in 2017-2021 show that as many as 12 out of 53 companies in the mining sector are experiencing financial distress. Of the total sample, 12.83% indicated financial distress. Financial performance as measured through the financial ratios of profitability, liquidity, leverage, and sales growth affects the financial distress of companies in the energy sector. Meanwhile, activity ratios and CFO do not affect the financial distress of companies in the energy sector. Macroeconomic conditions of interest rates, economic growth, and Covid-19 did not affect financial distress in energy sector companies.

### Recommendations

Companies that want to protect themselves and avoid financial distress must be able to use and manage assets, manage debt so that it is not too large, and maintain high sales. If the company has indications of financial distress, the company can restructure bank debt to strengthen the capital structure and improve overall cash position, as well as make cost efficiencies.

Financial distress can be influenced by a variety of factors, this study is limited to financial factors and includes little macroeconomic conditions, but for further research, it can use non-financial factors as well as broader macroeconomic factors. Besides that, this study uses the Zmijewski probit model in indicating financial distress, further researchers can use other models to indicate financial distress by the research object.

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