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# Potential Bankruptcy of Digital Companies in Indonesia; Analysis of Market Aspects and Financial Aspects Using Springate and Grover Methods

**Novi Diah Wulandari[1*], Winike Kushindrajati Aprilia[2]**

[1,2] *Yogyakarta Nahdlatul Ulama University, Yogyakarta, Indonesia*
[*]*Corresponding email: d.wulandari@unu-jogja.ac.id*

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ABSTRACT

Digital companies are companies that are growing very rapidly, but face many problems that can lead to bankruptcy. Therefore, bankruptcy prediction is an important topic that must be considered. If a company wants to survive and develop, it must pay attention to financial and market aspects. Therefore, in this survey, we selected six digital companies listed on the IDX between 2018 and 2021 as samples using the observation method. The analytical method used is Springate and Grover because it is considered good for knowing the financial distress of a company. This study aims to determine the condition of the company for the progress and sustainability of the company and help investors to determine investment. In addition, this study also aims to find out what method is right for predicting the financial distress of digital companies listed on the Indonesia Stock Exchange. Financial findings using the Springate approach show 3 companies in the bankrupt category, 1 potentially bankrupt and 2 healthy. Instead, according to Grover's method, 1 company is bankrupt and 5 are healthy. The accuracy rate for the Grover method is 83% with a low error rate of 17% so that it can be said that the Grover method is considered better for predicting bankruptcy. From a market perspective, all the companies in this study have excellent market potential. Companies must pay attention to financial and market aspects to avoid bankruptcy and develop better.

Keywords:
Digital company, digitization, financial distress, financial analysis, market analysis



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## 1. Introduction

Over the years, the number of companies has continued to grow, and digital innovation (Jafari-Sadeghi et al., 2021; Talwar et al., 2020) has fundamentally changed the way organizations collaborate and compete, resulting in new collaborative value creation networks (Hernandez-Almazan et al., 2022; Zamiri et al., 2022) such as digital business ecosystems (Suuronen et al., 2022; Tchoffa et al., 2021; Zapadka et al., 2022). Digital business is a business that is growing very rapidly which can be seen with many companies that have gone digital. Digital business is a hot topic because technological developments (Belousova et al., 2022; Böttcher et al., 2022) and

infrastructure advancements create various opportunities for entrepreneurs (Kraus et al., 2019). In the 4.0 revolution era, innovative business models (Carissimi & Creazza, 2022; Karakose et al., 2022; Reis et al., 2022) driven by digital transformation will benefit companies (Frank et al., 2019). As a result, many companies are turning to digital systems. A digital company is one that can digitally mediate and connect all important business relationships such as customers, suppliers and employees (Ren et al., 2022). In addition, COVID has made digital transformation (Hanelt et al., 2021; Nambisan et al., 2019; Warner & Wäger, 2019) a must for every business and every sector, digitalization is no longer an option or a complement (Amankwah-amoah et al., 2021; Sjödin et al., 2020), but the need to expect a certain level of digital maturity is on many agendas. Starting a digital business is much more than just computerizing sales, purchases, inventory or finance. It's just part of the master plan to build a digital business. This is all due to the rapid development of technology driving organizational systems and people as well as new organizational business models. Utilizing technological developments will help companies in marketing aspects (Chichkanov et al., 2021; Edeh et al., 2020; Hänninen et al., 2021).

Digitalization supports companies in achieving their corporate goals. The company's goal is to generate profits, and profits must be developed and maintained for the sustainable development of the company(Astuti, 2021). The profit earned is used as part of management's success in running the company. Investors are usually very interested in returning their funds. However, many companies are not competitive, unable to develop further, and even go bankrupt. This means that for most companies, digital transformation requires strong leadership, competence of the right people, and overcoming several hurdles for successful implementation, and it is this financial strength that will definitely push the company forward, because it cannot be realized without capital. Businesses can survive by using Explain Financials to understand the state and evolution of their finances over the years. Knowledge of impending bankruptcy is the most important aspect in the decision-making process of the company itself and other institutions that interact with the company (Zoričák et al., 2020). In this way, it will be very helpful to understand the progress of the company that has been realized and know the weaknesses and strengths of the company can be identified and the results of the analysis can also be used by the owner or manager of the company for future planning. Things that are considered good must be maintained, and things that are considered bad must be addressed immediately so that they don't get worse. By conducting a ratio analysis of the company's financial condition, the company's bankruptcy risk can be seen and measured through financial reports.

A comprehensive understanding of the risk factors associated with subjective financial distress is needed to inform the development of valid and effective interventions to address financial toxicity (Pauge et al., 2021). Analysis of the causes of bankruptcy is intended to predict the state of the company and considerations for the company. Bankruptcy can be predicted by looking at financial ratios that are getting worse every year. If a company loses more than 50% of its paid-up capital, does not pay dividends for three years and does not make transactions for six months, it can be declared bankrupt. To compare the results of the analysis, an equalization of the criteria of all models was carried out into the distressed group and the non-distressed group.

The research was conducted on digital companies listed on the IDX that published their financial reports for the period 2018 to 2021. In this study, the Springgate and Grover methods were used to predict bankruptcy because this method has been commonly used by previous researchers and is considered more accurate. However, the Grover method is considered more appropriate for predicting financial distress. This research was also conducted to determine the most accurate bankruptcy prediction method for companies listed on the Indonesia Stock Exchange (IDX). Research that analyzes the probability of bankruptcy of digital companies from a financial and market perspective is new and has never been researched before. The research aims to determine the status of digital companies for the progress and sustainability of the company and to assist investors in determining investment.

## 2. Methods

This study uses a descriptive quantitative method, namely by collecting, clarifying, and analyzing data obtained from company reports to obtain a picture of the actual situation. The type of data used is internal data with quantitative data classification used in the form of financial reports of digital companies going public which were obtained through the website from www.IDX.co.id or the Indonesia Stock Exchange and have been audited by a public accountant. The range of financial report data for the period 2018 to 2021. Researchers also obtained data from books, literature, journals, and previous research to support this research. The population in this study are all digital companies listed on the Indonesia Stock Exchange, while the sample used is 6 companies using a purposive sampling technique with the criteria of companies that still exist in 2021 and publish annual financial reports continuously from 2018-2021. The variables used in this study are: the ratio of working capital to total assets, the earning power of total investment ratio, the ratio of net profit before tax to current liabilities, total asset turnover and returns.

Data processing techniques use the Springgate Method and the Grover Method. Springate is developed by Gorgon L.V. Springgate, who conducted research to find a model to predict bankruptcy probability. By using the four ratios of working capital to total assets, EBIT to total assets, EBIT to total current liabilities, and sales to total assets, the probability of bankruptcy is analyzed using the following model: S = 1,03 A + 3,07 B + 0,66 C + 0,4 D 4. S is the bankruptcy index, A=working capital/total assets, B=EBIT/total assets, C=EBIT/current liabilities, and D=sales/total assets. If the S score > 1.062 is in the healthy category, then 0.862 < S score < 1.062 is likely to go bankrupt (gray area), S score < 0.862 is in a potentially bankrupt condition. The Grover model was created by designing and re-evaluating Altman's Z-score model. Jeffrey S. Grover used a sample based on Altman's Z-score model in 1968 and added 13 new financial ratios (Hantono, 2019). Obtained equation G = 1,650 X1 + 3,404 X2 -0,016 X3 + 0,057. Note: X1 = Working capital/Total assets X2 = Net profit before interest and tax/Total assets X3 = Return on assets (ROA). The grover model categorizes companies in bankruptcy with a value less than or equal to -0.02 ($Z \leq -0.02$). While the value for companies that are categorized as not bankrupt is more or equal to 0.01 ($Z \geq 0.01$) and $-0.02 \leq G \leq 0.01$ companies in a gray area (Nur Novi Trianti Sakinah & PUJI, 2021)

## 3. Results

### a. Financial Aspect Analysis

The first aspect is reviewed through the company's financial statements. The results of the analysis of potential bankruptcy using the Springate method for digital companies. Data analysis begins by calculating financial ratios, performing calculations using the formula set by Springate then analyzing whether the company has the potential to go bankrupt, is a gray area (prone to bankruptcy) or is healthy using the Springate method as shown in table 1.

**Table 1. Springate Method Data Analysis**

| Code | Year | A | B | C | D | Springate Value | Criteria |
|---|---|---|---|---|---|---|---|
| GOTO | 2018 | 0.213 | (0.571) | (3.930) | 0.070 | (4.099) | Bankrupt |
| | 2019 | 0.196 | (1.129) | (4.737) | 0.108 | (6.348) | Bankrupt |
| | 2020 | 0.457 | (0.558) | (2.913) | 0.151 | (3.103) | Bankrupt |
| | 2021 | 0.153 | (0.143) | (1.807) | 0.021 | (1.466) | Bankrupt |
| AMZN | 2018 | 0.041 | 0.069 | 0.165 | 1.432 | 0.936 | Grey Area |
| | 2019 | 0.038 | 0.062 | 0.159 | 1.245 | 0.833 | Bankrupt |
| | 2020 | 0.020 | 0.075 | 0.191 | 1.202 | 0.858 | Bankrupt |
| | 2021 | 0.046 | 0.091 | 0.268 | 1.117 | 0.950 | Grey Area |
| NFLX | 2018 | 0.012 | 0.614 | 24.568 | 2.827 | 19.242 | Healthy |

| Code | Year | A | B | C | D | Springate Value | Criteria |
|---|---|---|---|---|---|---|---|
| | 2019 | 0.016 | 0.049 | 24.227 | 0.220 | 16.245 | Healthy |
| | 2020 | 0.247 | 0.014 | 7.057 | 0.196 | 5.033 | Healthy |
| | 2021 | (0.009) | 0.044 | 0.233 | 0.176 | 0.351 | Bankrupt |
| | 2018 | 0.105 | (0.009) | (0.026) | 0.571 | 0.292 | Bankrupt |
| | 2019 | 0.121 | 0.004 | 0.013 | 0.596 | 0.384 | Bankrupt |
| NOKIA | 2020 | 0.178 | 0.021 | 0.063 | 0.604 | 0.530 | Bankrupt |
| | 2021 | 0.187 | 0.048 | 0.159 | 0.554 | 0.667 | Bankrupt |
| | 2018 | (0.015) | 0.177 | 0.787 | 0.634 | 1.300 | Healthy |
| | 2019 | (0.075) | 0.171 | 0.649 | 0.613 | 1.122 | Healthy |
| TLKM | 2020 | (0.091) | 0.157 | 0.561 | 0.553 | 0.979 | Healthy |
| | 2021 | (0.028) | 0.158 | 0.632 | 0.517 | 1.078 | Healthy |
| | 2018 | 4.619 | (0.073) | (0.021) | 0.951 | 4.901 | Healthy |
| | 2019 | 0.298 | (0.014) | (0.034) | 0.524 | 0.453 | Bankrupt |
| BUKA | 2020 | (0.272) | (0.706) | (2.077) | 0.521 | (3.611) | Bankrupt |
| | 2021 | 0.858 | (0.056) | (0.499) | 0.070 | 0.410 | Bankrupt |

The results of an analysis of potential bankruptcy using the Grover method for digital companies. Data analysis begins with calculating financial ratios, carrying out calculations using the formula set by Grover then analyzing whether the company has the potential to go bankrupt or is healthy using the Grover method as shown in table 2.

**Table 2. Grover Method Data Analysis**

| Code | Year | X1 | X2 | X3 | Z-score | Criteria |
|---|---|---|---|---|---|---|
| GOTO | 2018 | 0.213 | (0.571) | (0.546) | (1.543) | Bankrupt |
| | 2019 | 0.196 | (1.129) | (1.064) | (3.480) | Bankrupt |
| | 2020 | 0.457 | (0.558) | (0.472) | (1.094) | Bankrupt |
| | 2021 | 0.153 | (0.143) | (0.138) | (0.180) | Bankrupt |
| AMZN | 2018 | 0.041 | 0.069 | 0.062 | 0.362 | Healthy |
| | 2019 | 0.038 | 0.062 | 0.051 | 0.331 | Healthy |
| | 2020 | 0.020 | 0.075 | 0.066 | 0.347 | Healthy |
| | 2021 | 0.046 | 0.091 | 0.079 | 0.443 | Healthy |
| NFLX | 2018 | 0.012 | 0.614 | 0.521 | 2.174 | Healthy |
| | 2019 | 0.016 | 0.049 | 0.043 | 0.251 | Healthy |
| | 2020 | 0.247 | 0.014 | 0.015 | 0.512 | Healthy |
| | 2021 | (0.009) | 0.044 | 0.036 | 0.193 | Healthy |
| NOKIA | 2018 | 0.105 | (0.009) | (0.009) | 0.200 | Healthy |
| | 2019 | 0.121 | 0.004 | 0.000 | 0.271 | Healthy |
| | 2020 | 0.178 | 0.021 | (0.070) | 0.420 | Healthy |
| | 2021 | 0.187 | 0.048 | 0.041 | 0.530 | Healthy |
| TLKM | 2018 | (0.015) | 0.177 | 0.087 | 0.635 | Healthy |
| | 2019 | (0.075) | 0.171 | 0.084 | 0.518 | Healthy |

| | | | | | |
|---|---|---|---|---|---|
| | 2020 | (0.091) | 0.157 | 0.084 | 0.442 | Healthy |
| | 2021 | (0.028) | 0.158 | 0.089 | 0.548 | Healthy |
| BUKA | 2018 | 4.619 | (0.073) | (7.312) | 7.314 | Healthy |
| | 2019 | 0.298 | (0.014) | (0.014) | 0.502 | Healthy |
| | 2020 | (0.272) | (0.706) | (0.520) | (2.804) | Bankrupt |
| | 2021 | 0.858 | (0.056) | (0.063) | 1.280 | Healthy |

Based on research on 6 digital companies listed on the IDX in the 2018-2021 period with the grover score model, the result was that PT GoTo Gojek Tokopedia Tbk in 2018-2021 was in a state of bankruptcy. Amazon.com, Netflix, Nokia Corporation, PT Telkom Indonesia for the 2018-2021 period are in good health. While PT Bukalapak.com Tbk was in good health in 2018-219, in 2020 it went bankrupt. And experienced an increase in 2021 then entered the healthy category.

**Table 3. Digital Company Average Financial Distress Results 2018-2021**

| COMPANY CODE | SPRINGATE METHOD | | GROVER METHOD | |
|---|---|---|---|---|
| GOTO | -3.75 | BANGKRUT | -1.57 | Bankrupt |
| AMZN | 0.89 | GREY AREA | 0.37 | Healthy |
| NFLX | 10.22 | SEHAT | 0.78 | Healthy |
| NOKIA | 0.47 | BANGKRUT | 0.36 | Healthy |
| TLKM | 1.12 | SEHAT | 0.54 | Healthy |
| BUKA | 0.54 | BANGKRUT | 1.57 | Healthy |

Based on the average financial distress table using the springate method, there are 2 healthy companies, 1 gray area, and 3 companies in bankruptcy or financial difficulties. Meanwhile, based on the grover method, there is 1 company in bankruptcy and 5 companies with sufficient or healthy financial condition.

**Table 4. Comparison of the Prediction Accuracy Test of the Springate Method and the Grover Method**

| Prediction Method | Level of accuracy | Error Rate |
|---|---|---|
| Springate | 50% | 50% |
| Grover | 83% | 17% |

The table shows a comparison of the results of the analysis using the springate and grover methods for digital companies listed on the Indonesia Stock Exchange. The highest accuracy score is occupied by Grover with an accuracy rate of 83% and an error rate of 17%. The second position is occupied by Springate with an accuracy rate of 50% and an error rate of 50%. This shows that the Grover method is an accurate method for predicting financial distress, this is in accordance with previous research that the Grover method is a suitable bankruptcy predictor for predicting coal companies on the Indonesia Stock Exchange.

**b. Market Aspect Analysis**

1. PT GOTO GOJEK TOKOPEDIA TBK

This company's market potential is huge in terms of its demand approach, because many consumers need and get help from this business, so does the market potential. This business is also available to all people. People's purchasing power also tends to be higher. This is because most people choose something simple, easy and practical to meet their basic, major and minor needs. And this business covers all the needs of society because it combines e-commerce services, delivery of goods and food, transportation and finance.

Business competition in the industry is fierce, with Goto competing with startups such as Alibaba, Lazada, Grab, Shopee and Bukalapak. If a company does not apply the right innovation and marketing techniques, it will be replaced by competitors. According to iPrice research in Q4 2020, Shopee has the upper hand in terms of having the highest website traffic as it operates in all Southeast Asian countries. Tokopedia is in second place. The following is digital economic forecast data for Southeast Asia:

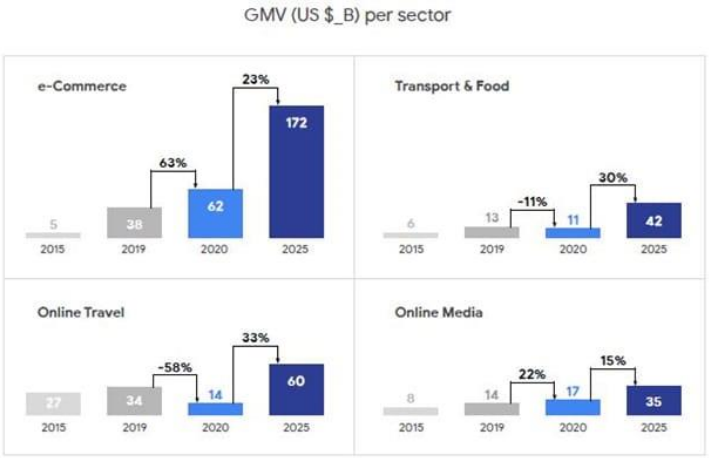


**Figure 1: Southeast Asia E-commerce Forecast**

Over the next five years, it will outperform e-commerce (Tokopedia) in terms of transportation and food (Gojek) growth, but from a transactional perspective, e-commerce will outperform. Food deliveries are expected to be even higher in the transport and food sector, reaching $23 billion by 2025, while the transport sector will reach $19 billion. Therefore, it can be concluded that Goto has yet to take first place in the commercial competition.

2. AMAZON.COM

Amazon's business potential is huge because it can reach a large number of consumers. Products and services from this business can also be used by all people and many people who need them. Amazon's focus on e-commerce makes cloud computing, digital streaming, and artificial intelligence very useful and can help people a lot. Business competition here is also quite fierce, but other companies will have a hard time beating Amazon. Amazon's main competitors are large companies such as Alibaba Group (BABA), Oracle (ORCL), Microsoft (MSFT), International Business Machines Corporation (IBM), and Google (GOOG). According to Global Data, Amazon is the largest e-commerce company in the world, followed by Alibaba in second place. Amazon grossed $280 billion during the Covid-19 pandemic, compared to Alibaba's $78 billion. But in terms of growth, Alibaba did even better with a growth of 37.6% compared to Amazon's 14.6%. (Asih, 2021).

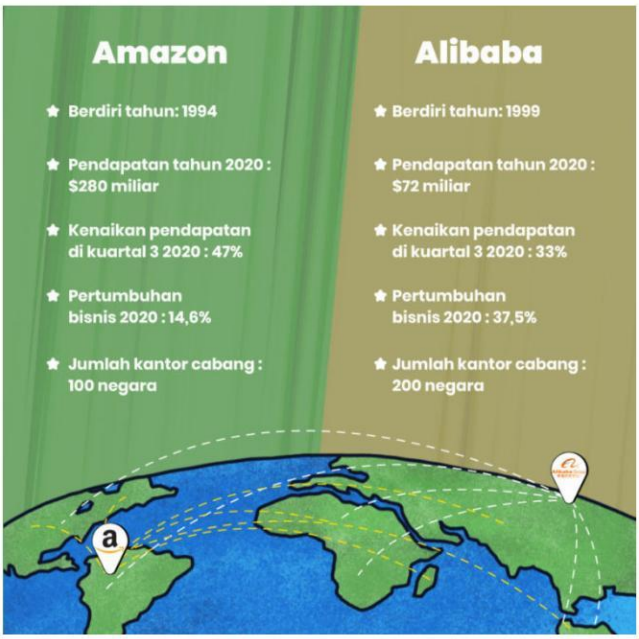


**Figure 2: Amazon and Alibaba Competition**

3. NETFLIX

Netflix's market potential is huge because this business is not for everyone and there is a focus or specialization in this business. Netflix's target market is men and women between the ages of 17 and 60 and households with an income level of $30,000 or higher. Also, segments are based on psychographics rather than demographics. Not everyone has a hobby of watching, and watching is not a staple. The business has rivals such as Iflix which has been offering streaming services since 2014, Amazon Prime Videos, HBO Go and Viu. Netflix is second after Disney among its competitors.


| | NETFLIX | prime video | hotstar | ZEE5 |
|---|---|---|---|---|
| WHAT IS IT GOOD FOR? | ORIGINALS | ORIGINALS + MOVIES IN ALL LANGUAGES | DISNEY & MARVEL MOVIES + SPORTS | ORIGINAL CONTENT + SERIALS |
| WORKS ON MORE THAN 1 DEVICE AT A TIME? | DEPENDS ON PURCHASED PLAN | YES (3 SCREENS) | YES (5 SCREENS) | YES (5 SCREENS) |
| SUITED FOR | YOUNG ADULTS | ADULTS & FAMILY | FAMILY & KIDS | FAMILY |
| FREE TRIAL? | YES, 1 MONTH | YES, 1 MONTH | NO | YES, 15 DAYS |
| AVAILABLE ON MOBILE? | YES | YES | YES | YES |
| PRICE | Starts At Rs199/Month Rs2388/Year | Rs129/Month Rs999/Year | VIP: Rs399/Year Premium: Rs299/M Premium: Rs 1499/Y | Rs89/Month Rs699/Year |
| NUMBER OF MOVIES | 3781 | 5000 | 2000 | 3147 |
| NUMBER OF ORIGINALS | 1500 | 130 | 20 | 70 |
| ONLINE RATINGS | 4.4/5.0 | 4.4/5.0 | 4.1/5.0 | 3.1/5.0 |

**Figure 3: Netflix Position and Its Competitors**

It can be seen from the several facilities provided by Netflix, Netflix gets a fairly high online rating of 4.4/5.


**Figure 4: Straming Charts**

Disney is ranked the largest at 22% and followed by Netflix has a market share of 21% which ranks second.

4. NOKIA COORPORATION

The potential for this business market is quite large, now in the 4.0 era, technology has become a necessity for the community, and people are used to using existing technology to assist them in their daily activities. The effort also involves the entire community, with a broad target market. There are many competitors in this business like Asus, Xiaomi, Blackberry, Iphone. In this industry, companies must always try to make new products with the latest models, good quality, and complete functions in order to survive and be number one. Nokia's position is not yet in first place, you can see the image below:

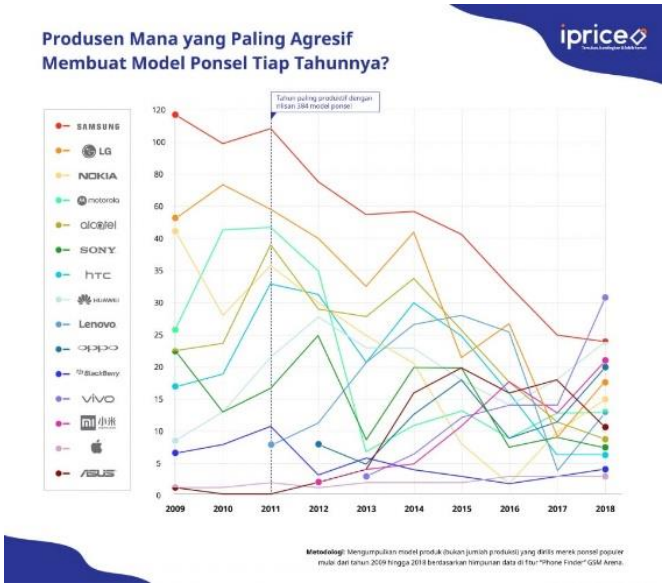


**Figure 5: Most Aggressive Mobile Phone Maker Manufacturers Chart**

As shown above, Nokia is not the most active mobile phone manufacturer. Samsung is in first place, but the trend is declining, and vivo, which was at the bottom in 2018, overtook Samsung and jumped to the top spot. The iPhone is the least aggressive phone maker, but the graphics cards in

iPhones are often the most stable. It can be seen from the image below which shows that Nokia is not ranked in the top 5.

| Vendor | 4Q20 Sales | 4Q20 Market Share (%) | 4Q19 Sales | 4Q19 Market Share (%) | 4Q20-4Q19 Growth (%) |
|---|---|---|---|---|---|
| Apple | 79,942.7 | 20.8 | 69,550.6 | 17.1 | 14.9 |
| Samsung | 62,117.0 | 16.2 | 70,404.4 | 17.3 | -11.8 |
| Xiaomi | 43,430.3 | 11.3 | 32,446.9 | 8.0 | 33.9 |
| OPPO | 34,373.7 | 8.9 | 30,452.5 | 7.5 | 12.9 |
| Huawei | 34,315.7 | 8.9 | 58,301.6 | 14.3 | -41.1 |
| Others | 130,442.8 | 33.9 | 145,482.1 | 35.8 | -10.3 |
| **Total** | **384,622.3** | **100.0** | **406,638.1** | **100.0** | **-5.4** |

**Figure 6: Top 5 Smartphone Sales to End Users by Vendor in 4Q20**

5. PT TELKOM INDONESIA

The market potential for this business is huge. Because it has a very broad target market and a large number of consumers. Many people need the company's products and services. Especially in this digital era, the use of Telkom's products and services is increasing. These businesses include PT PLN (Persero) through its subsidiary PT Indonesia Comnets Plus (ICON+) which offers Inconet internet package services and internet packages for cable TV, as well as PT Persahan Gas Negara Tbk (PGN) for digital. Since 2019, it is believed that the launch of the Gasnet business was carried out by PT Jaasa Marga Tbk (JSMR) through its subsidiary PT Jasa Marga Related Business (JMRB) which is engaged in the internet business, following several SOE procedures. internet business. Among the many competitors, PT Telkom Indonesia is ranked first, and Telkom is also an Indonesian company that is included in the top 500 companies in the world.

6. PT BUKALAPAK.COM TBK

It can be seen that the market potential for this business is very large, the target market for this business is very broad and numerous, and the daily needs that meet basic, secondary and tertiary needs are also very complete. Competition in this industry is very tight, so many e-commerce companies have emerged, such as Shopee, Tokopedia and Lazada. Its market position relative to its competitors ranks fourth, lower than other marketplaces such as Shopee, Tokopedia and Lazada. This can also be seen from the following image:


**Figure 7: E-commere Top of Mind Awareness**

**4. Discussion**

Based on the results of financial analysis of 6 digital companies which have been carried out using the Springate method for the past 3 years. The calculation results show that there are 5 companies that have the potential to go bankrupt, namely companies with stock codes GOTO, AMZN, NFLX, NOKIA, BUKA. This problem is caused by the variable X1 NWCTA (working capital to total assets) in this ratio Amazon and Netflix have a low value where the company has less working capital than asset X2 namely EBITA where assets are greater than profit before interest expense and taxes earned company, which means not using assets effectively so that income is low. Bankruptcy analysis at PT GoTo Gojek Tokopedia Tbk is included in the criteria for bankruptcy (S<0.862). In 2018 with a value of -4.099 which means management is unable to manage working capital to generate company assets. In 2019 the springate value fell to -6,348, this was due to a decrease in working capital to total assets. In 2020 the springate value rose to -3,103 due to additional working capital to total assets. In 2021 the company continues to make improvements so that the value rises to -1,466 even though it is still in the bankruptcy category.

Amazon.com in 2018 was included in the gray area category (threatened with bankruptcy) with a value of 0.936. This happened because the company was unable to generate net working capital and company productivity. In 2019 and 2020 it experienced bankruptcy with a value of 0.833 and increased to 0.858 in 2020 this happened because there was a decrease in working capital to total assets. In 2021 the company will increase its position to become a gray area with a value of 0,950 due to additional working capital for assets. Netflix in 2018 to 2020 is in good health even though it has experienced quite a drastic decline from year to year. In 2018 it had a value of 19,242 and fell to 16,245 in 2019 and then dropped drastically to 5,033. This decrease occurred due to the company's lack of ability to generate profit from the assets used and from total liabilities, besides that the company was also less efficient in utilizing its assets for generate profit. In 2021 Netflix went bankrupt with a very drastic decrease in value of 0.351 due to a very drastic decrease in working capital to assets.

Nokia Corporation in 2018-2021 is in the bankrupt category. But in the period 2018 to 2021 it continues to increase. In 2018 with a value of 0.292 this was due to a decrease in profits earned by the company. And this has increased from year to year, in 2019 with a value of 0.384, in 2020 with a value of 5.30, and in 2021 with a value of 0.667 this happened due to the addition of working capital to assets which resulted in an increase in company profits. PT Telkom Indonesia is a company with a healthy condition and is not threatened with bankruptcy in 2018-2021. In 2018 it had a value of 1.300 and fell to 1.122 in 2019 and then decreased again in 2020 with a value of 0.979. This decrease occurred because the profits earned by the company decreased and working capital to assets also decreased. But in 2021 it has increased to 1,078 due to an increase in working capital to the company's assets and the increase in profits earned by the company. Even though it had experienced a decline in 2018-2020 the company was included in a healthy and stable condition, it was also proven that there was an increase in 2021. PT Bukalapak.com Tbk in 2018 was included in the healthy category with a value of 4,901. But in 2019-2021 the company was in a state of bankruptcy where in 2019 the value dropped to 0.453 due to a decrease in working capital to assets (Mazreku et al., 2020) and a decrease in company profits. In 2020 the value dropped significantly to -3,611 due to a decrease in working capital in the company's assets and profits (NGUYEN et al., 2020; Pirttilä et al., 2020). In 2021 the value will increase to 0.410 due to the addition of working capital to assets that have an impact on the profit earned by the company.

Knowing the company’s location is one of the most important things for a sustainable company. Conducting an analysis of financial difficulties (Ságі et al., 2020; Tsourvakas & Yfantidou, 2018) will help understand the company's condition and help decide the strategy to be implemented by the company. Information about financial difficulties can be very useful for all parties because it allows them to determine the circumstances of financial difficulties. It can be used as a decision-making tool or action to improve the situation and prevent the company from going bankrupt. This information facilitates management actions to prevent bankruptcy, improve debt servicing, take steps to manage the company well, and provide early warning signs of future bankruptcy. It is important not only to understand the company's market situation, but also to consider the competition with other companies. Market analysis can also provide an overview of the target

market of the products being sold. In addition, companies can formulate product positioning and marketing strategies for each relevant product. Market analysis can help understand consumers, help businesses grow, identify trends, test products, and minimize company failures.

## 5. Conclusion

According to Springate's calculations, there are three companies that are in the bankrupt category, namely PT Goto Gojek Tokopedia Tbk, PT Bukalapak.Co.Tbk, and Nokia Corporation. Companies in the category prone to bankruptcy or in the gray area are Amaazon.Com, while companies in good health are only PT Telkom Indonesia and Netflix. On the other hand, according to Grover's calculation method, PT Goto Gojek Tokopedia Tbk, is a bankrupt company, and five other companies are healthy. Based on these findings, Grover's calculation method is believed to be more detailed and accurate in determining the probability of bankruptcy. While studies show that many companies go bankrupt from a financial perspective, from a market perspective the digital companies surveyed have broadly profitable market prospects. So that companies on the safe side need to maintain their financial position and marketing, and management needs to pay attention to and improve the company's financial performance in order to avoid bankruptcy. At the same time, weakened or bankrupt companies need to better understand current market conditions, improve their work systems, increase sales, and maintain liquidity and operations resulting in reduced debt. Therefore, companies are expected to pay more attention to calculations regarding bankruptcy and the company's financial health to prevent and predict a company going bankrupt. In addition, affected companies are required to make a bankruptcy potential analysis with specific parameters determined by the Financial Services Authority (OJK). Reducing debt financing, increasing sales, maximizing the use of company assets and capital can avoid financial difficulties for companies. By building an assessment of bankruptcy risk based on an effective discriminant analysis index to determine the effect of company performance on risk. As a capital investor, you should do an initial analysis not only of financial statements, economic conditions, but also of other conditions that affect company performance.

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