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COMPANY CHARACTERISTICS THAT AFFECT FINANCIAL DIFFICULTIES IN VARIOUS ECONOMIC CONDITIONS IN NON-FINANCIAL SERVICES COMPANIES IN INDONESIA

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Abstract
The research conducted aims to analyze and determine the factors of company characteristics that can affect the prediction of corporate distress during economic fluctuations with an empirical study of non-financial service companies listed on the Indonesia Stock Exchange from 1998 - 2019. The type of research conducted is quantitative research where the object of research is non-financial service companies listed on the Indonesia Stock Exchange with a sample of 66 companies. research using panel data with panel data regression analysis. The findings of this study reveal that in predicting corporate distress, which is influenced by company characteristics, to determine the condition of the company whether it experiences corporate distress or not, calculations are carried out with the Zmijewsky model and with panel data estimation to determine the effect of company characteristics consisting of company experience, number of workers, number of share ownership and type of ownership and company size. From the results obtained during the economic downturn, the influential characteristic is the number of workers, while during economic growth or recovery, the influential characteristics of the company are company experience and company size.
Keywords: Company Characteristics, Corporate distress, economic turmoil.

Introduction

In recent years the company is faced with intense competition, a dynamic environment and worsening economic conditions that make companies do various ways to maintain the condition of the company which causes the company to have financial problems with the decline in profits obtained by the company causing the company to experience difficulties (*Corporate distress*). The difficulties experienced by the company are inseparable from the company's ability to deal with various uncertainties in the global world. For companies, the occurrence of political and economic turmoil brings renewal in corporate management practices where companies must be able to anticipate and take strategic steps and mitigate against environmental changes that occur. The risks experienced by companies due to the political and economic environment bring changes in economics and finance (Var et al., 2013). Financial risk in policy uncertainty has a significant impact on the company. Companies must be able to manage risks to remain and survive in an unstable political and economic scene.

The economic and financial stability of companies is of concern to many, including investors, bankers, government agencies, regulators, and auditors. The performance of companies listed on the stock market is an important indicator, including for investors to adjust the stock portfolio, for creditors to calculate the cost of loan *defaults* and the Company's loan conditions,

for the government and authorities used to regulate and monitor the financial status of companies in general so that economic and industrial policies can be carried out appropriately, Furthermore, auditors need to examine the going concern status for companies to present accurate statements regarding the Company's financial status.

The legal event of corporate bankruptcy does not adequately represent the complexity of the real economy of a company going through financial distress. For example, if a failing firm goes through a long process of failure, there will be a considerable time gap between the period the firm enters a state of financial distress and the possible final event of legal bankruptcy. (Balcaen & Ooghe 2006).. The consideration of financial distress as a way (rather than an event) appears more complex to define and categorize precisely, but closer to reality as it does not only consider the official date of failure, making for different notions and steps in each company in the process of determining financial distress. The extension of time makes it a better sequence of steps (Agostini, 2018). In this way, financial distress becomes a dynamic process in which the majority of distressed firms do not actually become insolvent.

The recognition of the fact that firm failure does not lead to a bankruptcy filing has gained ground in the academic literature and has been an important premise for the evolution of the definition of social stress finance after early contributions to the topic of financial distress (Jones 1987; Gilbert et al., 1990; Flagg et al., 1991; Barnes, 1987; Barnes, 1990). eventually academic and practitioner studies tried to move from an ex post to an *ex ante* model *approach* while remaining based on financial symptoms. More recent approaches adopt financial criteria based on the firm's failure to meet financial obligations and consider the firm as distressed not only when filing for bankruptcy, Wruck (1990), Asquith et al. (1991), Andrade & Kaplan (1998), Whitaker (1999), Sanz & Ayca (2006), among others. including the first to consider a sample of exclusively distressed firms and identify four events namely dividend reduction, "*going concern*" fair opinion, troubled debt restructuring, and breach of debt covenants to signal that the firm is in distress.

The political and economic uncertainty of the current decade has led to an increase in corporate bankruptcies around the world. The rate of bankruptcies experienced by companies in the United States is the highest, followed by the United Kingdom, and Taiwan. Bankruptcies in the United States during the third quarter of 2016 were 2,445, followed by Hong Kong bankruptcies of 6460. Bankruptcies in Italy rose to 3800 companies in the second quarter of 2016 from 3640 companies in the first quarter of the same year. UK bankruptcies grew to 3633 in the third quarter of 2016 from 3617 in the second quarter of 2016. Taiwan bankruptcies rose to 2132 companies in Nov 2016 from 1981 companies in Oct 20161. (Bhutta, 2020). A similar incident also occurred in Indonesia where in 2009 - 2018 there were 40 delisting companies listed on the Indonesia Stock Exchange. Among those delisted are the service sector as many as 22 companies which is the largest number of delisting followed by manufacturing companies totaling 15 companies and the least delisted are mining sector companies totaling 3 companies. (Novita, 2020). The data obtained shows that the largest number of companies delisted in that period were service sector companies, which means that the service sector is very vulnerable to the economic and political turmoil that occurs.

Service sector companies are the most important supporting sectors of other sectors, such as the transportation and telecommunications sectors that support the activities of the manufacturing sector in distributing and marketing their products. This sector consists of

thirteen industries consisting of subsectors, real estate, construction, energy, toll roads, ports and airports, telecommunications, transportation, wholesale and retail trade, hotel restaurants and tourism, advertising printing and media, health, computer services and devices. It is a sector that is highly dependent on mobility and interaction between consumers and producers. Changes in policy and economic stability have a significant impact on the growth of the services sector.

Literature Review
Financial Hardship
The development of the concept of financial distress is still continuing which is part of the pre-existing definitions including research by Cheng et al (2018) modified the stages of financial administration and broadly defined them based on financial distress and financial stability with four states of financial distress used in the original model, Then modified this model to develop a prewarning model based on fuzzy regression. If the net worth of a company's shares is less than its book value, then the company is in the stage of financial distress. Ashraf et al. (2019) define a company as being in the early stages of distress if its stock quotation is less than 50% of book value for three consecutive years, then classify financial distress as a reduction or omission of dividend payments for five consecutive years. Based on Theodossiou (1993) states that companies that stop publishing financial statements at least two years before filing for bankruptcy. If the company does not publish final accounts, the company will not hold an annual general meeting. Therefore, that companies that do not publish their financial statements for at least three consecutive years are in the early stages of financial distress.

On the other hand, capital market theory states that financial difficulties associated with the factors that influence them are not systematic. In the sense that financial difficulties can occur due to internal problems and also external conditions. Internal conditions that occur such as liquidity problems, leverage and losses due to poor operational activities that can cause the company to experience difficulties, and if the company is able to overcome internal problems, it is not certain that the company will avoid financial difficulties. Where factors that exist outside the company such as government regulations, technological changes, labor wage increases, economic growth of a country also spur the emergence of financial difficulties in the company.

Factors that cause corporate distress that come from outside the company which is a systematic risk that cannot be avoided by the company but is a very important thing that can cause the company to experience difficulties include political, environmental, economic, legal, social, cultural, educational, security, and other factors that come from outside the company that cannot be avoided by the company. Researchers and analysts who have an interest in predicting company conditions prefer to use macroeconomic variables in explaining company conditions including economic growth, inflation rates, bank interest rates, and currency exchange rates.

Economic Conditions
Macroeconomic variables get special attention by various interests that exist towards companies and capital markets, where macroeconomic conditions that are often the center of attention are: economic growth, inflation rate, interest rate, and currency exchange rate. Stakeholders in companies and capital market players usually before investing and making decisions to invest will see and predict the economic conditions of a country that is usually

seen is fluctuations in economic growth rates, inflation, interest rates and currency exchange rates. This activity is not without reason, where stakeholders, especially investors, understand very well that the investment they will make is determined by the economic turmoil of a country that can be seen from fluctuations in economic growth, inflation, interest rates and foreign exchange rates where all of that will increase or decrease systematic risk that cannot be controlled by the company, and the company can only anticipate it, but this will also have a big impact on the company.

Increasing or decreasing investment in the real sector is potentially caused by economic turmoil with moving economic growth, inflation, interest rates, and foreign exchange rates, and this is stated in economic theory. The impact of the economic turmoil is on the activities and performance of the capital market which states that investments made in the capital market become risky due to high volatility. The economic turmoil that occurs for each company has a different effect depending on how the company responds to it, which is clear that economic turmoil is felt by every company.

The economic turmoil felt by the company depends on the conditions that exist in the company, the amount of risk that occurs in the company caused by economic conditions affects the company differently. Companies that are in good condition or financially healthy the impact of economic turmoil may not be too pronounced, but on the other hand if the company is financially poor then the economic turmoil will have a bad influence that will worsen the condition of the company. The company's poor condition will make the company unable to move to develop its activities, this will cause the company's performance to decrease, which in turn will make it difficult to increase the company's value and if it is not anticipated properly by the company manager, it will lead to bankruptcy.

The economic turmoil in question is the fluctuations that occur in economic growth which can be divided into growth / growth, slowing or declining growth, the lowest point (Truogh) and the highest point (Peak).

Research Methods

The research was conducted using panel data analysis where there were 66 companies with a research period of 21 years consisting of economic growth data that fluctuated. From this in this study that determines economic fluctuations is the voalitility of economic growth the data is divided into years that can be distinguished by the occurrence of economic fluctuations, namely: the economic cycle from 1998 to 2019 as follows:

Cycle 1:   1998 Trough/depreciation, 1999 expansion, 2000 and 2001 contraction

Cycle 2:   Expansion 2002, 2003, 2004, 2005, 2006, 2007 contraction 2008, 2009 expansion 2010

Cycle 3: cotraction 2011, 2012, 2013, 2014, expansion 2015, 2016, 2017, 2018 and 2019

Where the variables used are Company characteristics consisting of Company size (Size), Age, Number of workers, Ownership and type of Company as independent variables and financial distress as the dependent variable, which is predicted by the X-Score model from Zmijewesky. To determine which companies are experiencing difficulties, the measurement is carried out with the Zmijewski *X-Score* model with the formula:

X-Score **= -4.3 - 4.5Prof + 5.7Lev - 0.004Liq**

Description:

Prof = *Profitability proxied by return on assets*
Lev = *Leverage which is proxied by the debt ratio*
Liq = *Liquidity proxied by current* ratio

Results

From the data obtained by using panel data regression analysis, the following results can be found:

Estimation Under conditions of contraction/slow growth/decline in 2002, 2006, 2008, 2012, 2013, 2014 and 2018

Table 1 Panel Data Regression Estimation

Model	Variables	Coef	T statistic or z statistic	Prob.
Pooled least squared (PLS)	Cons	703,0497	6,91	0,000
Prob > F = 0.0000	Size	-14,28497	-2,65	0,008
R-Squared = 0.0558	Age	0,5548273	0,20	0,844
	Ln TK	-29,78236	-3,69	0,000
	KP	-0,8832161	-1,44	0,150
	Type	-4,817663	-0,13	0,896
Fixed effects model (FEM)	Cons	586,1728	3,28	0,001
Prob > F = 0.0317	Size	-1, 818364	-0,35	0,723
R-Squared = 0.0297	Age	-1,831108	-0,38	0,705
	Ln TK	-41,4631	-2,82	0,005
	KP	1,255278	1,44	0,151
	Type	-35,55302	-0,33	0,740
Random Effect Model (REM)	Cons	579,6459	4,13	0,000
Prob > F = 0.0104	Size	-3,32179	-0,68	0,497
R-Squared = 0.0392	Age	-0,8482104	-0,25	0,802
	Ln TK	-38,63599	-3,31	0,001
	KP	0,6450869	0,84	0,400
	Type	-6,658185	-0,10	0,921

Source: Stata processed results

From Table 1, it can be seen the estimation results for each regression model where using Pooled Least Squre (PLS) it is found that the model is significant with Prob. 0.0000 smaller than the sig value, 0.05, with Rsquere of 0.0478 or 4.78%. It can also be seen that of the 5 non-financial characteristic variables, only 2 variables have an influence on corporate distress, namely company size (Size) and labor (LnTK). If using the Regression fix Efect (FEM) model, it can be seen that the model is also significant with prob. 0.0317 and R squre of 0.0317 or 3.17% with the result that only the labor variable has an effect. Furthermore, the last model is the random effect model (REM). The results are not much different from the fix effect, where the prob value is significant for the model with Rsqure 0.0104 or 1.04% with the same number

of significant variables as the fix effect. For this reason, it is necessary to determine which model is better to use from the three models, so a model test is carried out.

The model test conducted can be seen from table 2

Table 2 Model estimation test

Model estimation	Probability
Chow Test	0,0000
Breusch Pagan Lagrange Multiplier (LM) test	0,0000
Hausman Test	0,3626

Source: Stata processing results

From Table 2 above, it can be seen that a good model to use is to use the random effects model (REM). With the results

Table 2 Variabel estimation with random effects,

Variabel	Coef	Std Error	Z	Prob.
Cons	579,6459	140,1883	4,13	0,000
Size	-3,32179	4,892776	-0,68	0,497
Age	-0,8482104	3,375286	-0,25	0,802
Ln TK	-38,63599	11,66418	-3,31	0,001
KP	0,6450869	0,766207	0,84	0,400
Type	-6,658185	67,19087	-0,10	0,921
Prob>Chi2	0,0104	R-Square	0,0392	

Source: Stata processed results

In Table 2, it can be seen that when the economy decreases or economic growth slows down, what affects *corporate distress* is the number of workers where the greater or large number of workers will cause the company to experience difficulties, this can be said that the burden borne by the company for labor when economic conditions decline becomes higher.

Estimation under Growth/recovery conditions: 2000, 2003, 2004, 2005, 2007, 2010, 2016, 2017 and 2019

Table 3 Panel Data Regression Estimation

Model	Variables	Coef	T statistic or z statistic	Prob.
Pooled least squared (PLS)	Cons	792,4896	6,57	0,000
Prob > F = 0.0000	Size	-43,69088	-4,61	0,000
R-Squared = 0.0902	Age	6,660194	2,22	0,027
	Ln TK	11,6035	1,23	0,219
	KP	-1,964432	-2,76	0,006
	Type	3,458956	0,07	0,946
Fixed effects model (FEM)	Cons	464,9079	2,30	0,022

Prob > F = 0.0191	Size	-5, 507666	-0,34		0,736
R-Squared = 0.056	Age	-9,107021	-2,32		0,020
	Ln TK	15,13844	1,23		0,219
	KP	0,1039338	0,12		0,902
	Type	-48,42896	-0,46		0,649
Random Effect Model (REM)	Cons	-618,6231	-2,05		0,041
Prob > F = 0.0000	Size	94,63459	3,47		0,001
R-Squared = 0.0685	Age	-23,05331	-4, 89		0,000
	Ln TK	13,37888	0,92		0,358
	KP	1,380913	1,48		0,148
	Type	omitet			

Source: Stata processing results

From Table 3, it can be seen the estimation results for each regression model where using Pooled Least Squre (PLS) it is found that the model is significant with Prob. 0.0000 smaller than the sig value, 0.05 with Rsquere of 0.0902 or 9.02%. It can be seen from the 5 non-financial characteristic variables that only 2 variables have an influence on corporate distress, namely company size (Size) and experience (age). If using the Regression fix Efect (FEM) model, it can be seen that the model is also significant with prob. 0.0191 and R squre of 0.056 or 5.60% with the result that only the Experience variable has an effect. Furthermore, the last model is the random effect model (REM). The results with a significant prob value for the model with Rsqure 0.0685 or 6.85% with a significant number of variables are Size and experience (Age). For this reason, it is necessary to determine which model is better to use from the three models, so a model test is carried out.

The model test conducted can be seen from table 4

Table 4 Model estimation test

Model estimation	Probability
Chow Test	0,0000
Breusch Pagan Lagrange Multiplier (LM) test	0,0000
Hausman Test	0,0000

Source: Stata processed results

From table 4 above, it can be seen that a good model to use is to use the Fixed effect model (FEM). To improve the estimation results, FE regression with robust test is performed.

Table 5 Variable estimation with fixed effects, robust

Variables	Coef	Robust Std Err	Z	Prob.
Cons	-618,6231	305,042	-2,03	0,047
Size	94,63459	6,960784	3,43	0,001
Age	-23,05331	1,250468	-3,31	0,002
Ln TK	13,37888	14,37021	-0,93	0,355

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KP	1,380913	1,250468	1,10	0,274
Type	0	0mmited		
Prob>Chi2	0,0080	R-Square	0,0685	

Source: Stata processed results

In Table 5, it can be seen that when the economy grows (recovery) the non-financial company characteristic variable that affects *corporate* distress is Company Experience (Age). experience shows that the more experience the company has, the less likely it is to experience corporate distress. And seen from the simultaneous results also increased with an R-square of 0.0685 or 6.85%. As for the company size variable when the economy grows, the size of the company has a positive effect on corporate distress, meaning that if the size of the company increases, the possibility for the company to experience corporate distress increases as well, meaning that in economic conditions improving the size of a large company will be a burden for the company if the company is unable to manage it.

Estimation at peak conditions (2001, 2007 and 2011)

Table 6 Panel Data Regression Estimation

Model	Variables	Coef	T statistic or z statistic	Prob.
Pooled least squared (PLS)	Cons	568,4479	3,50	0,001
Prob > F = 0, 0830	Size	-31,75961	-2,81	0,006
R-Squared = 0.0736	Age	-0,2762921	-0,07	0,947
	Ln TK	19,88993	0,80	0,427
	KP	-1,260402	-1,40	0,163
	Type	49,458956	1,49	0,138
Fixed effects model (FEM)	Cons	-194,6085	-0,43	0,667
Prob > F = 0.0690	Size	32, 507666	0,54	0,592
R-Squared = 0.0236	Age	-13,11586	-1,22	0,226
	Ln TK	10,22683	0,23	0,822
	KP	5,059078	2,37	0,021
	Type	0		
Random Effect Model (REM)	Cons	453,1046	2,44	0,015
Prob > F = 0.3642	Size	-28,06293	-2,05	0,040
R-Squared = 0.0627	Age	-1,050775	-0,22	0,823
	Ln TK	23,66169	1,53	0,127
	KP	-0,3014705	-0,29	0,769
	Type	61,30628	0,80	0,423

Source: Stata processed results

From Table 6, it can be seen the estimation results for each regression model where using Pooled Least Squre (PLS) it is found that the model is not significant because the Prob. value

of 0.0830 is greater than the sig value, 0.05. And it is also seen that all variables are insignificant. By using the Regression fix Efect (FEM) model, it can be seen that the model is also insignificant with prob. 0.0690 and there are also no significant variables. Furthermore, the last model is the random effect model (REM). The results with the prob value are not significant for the model.

Trough (depression) estimation: 1998 and 2009

Table 7 Panel Data Regression Estimation

Model	Variables	Coef	T statistic or z statistic	Prob.
Pooled least squared (PLS)	Cons	579,7088	2,99	0,003
Prob > F = 0.2883	Size	-18,6981	-1,51	0,132
R-Squared = 0.0315	Age	-2,235435	-0,55	0,580
	Ln TK	9,999243	0,58	0,561
	KP	-1,625444	-1,33	0,184
	Type	93,72471	1,15	0,251
Fixed effects model (FEM)	Cons	193,9833	0,60	0,548
Prob > F = 0.0214	Size	-17, 1358	-0,93	0,354
R-Squared = 0.0163	Age	-12,28471	-2,66	0,009
	Ln TK	59,47545	2,00	0,047
	KP	-1,830337	-0,93	0,354
	Type	264,46	1,74	0,084
Random effect Model (REM)	Cons	506,5798	2,35	0,019
Prob > F = 0.1336	Size	-19,15637	-1,45	0,148
R-Squared = 0.0260	Age	-6,475426	-1, 65	0,100
	Ln TK	22,35828	1,16	0,246
	KP	-1,437597	-1,08	0,282
	Type	129,4639	1,40	0,161

Source: Stata processing results

From table 7, it can be seen the estimation results for each regression model where using Pooled Least Squre (PLS) it is found that the model is not significant because the Prob. value of 0.0830 is greater than the sig value, 0.05. And it is also seen that all variables are insignificant. By using the Regression fixed Efect (FEM) model, it can be seen that the model is also insignificant with prob. 0.0690 and there are also no significant variables. Furthermore, the last model is the random effect model (REM). The results with the prob value are not significant for the model.

Discussion
The characteristics of companies that affect corporate distress in different economic conditions are different. When economic conditions contract or growth decreases, the company must pay

attention to the number of workers in the company, so that the company does not experience difficulties. in declining economic conditions, the company's expenses will increase, one of which is the burden of wages and salaries that must be paid to workers, while revenues decrease due to a decrease in income. this is in accordance with research conducted by Widarwati & Haryono, (2018) and Li et al., (2021). When the economy recovers or grows, what needs to be considered is experience where in a growing economy, company competition is also getting bigger and company experience is one of the competitive advantages owned by the company to be able to compete in a fierce competitive environment. While the growth of company assets which is a control variable is seen when economic growth improves, companies must have appropriate investments that can increase company value. Improper asset management will bring difficulties and large costs that will be borne by the company.

Conclusion

The economic turmoil in this study affects the prediction of corporate distress. This shows that every company has ways and methods of responding to economic uncertainty, but it cannot be avoided by the company. Companies can only mitigate risks with existing economic conditions. From the results of the analysis, economic growth has an impact on corporate distress where declining economic growth will increase the probability of the company experiencing difficulties. Economic turmoil is a systematic risk that must be faced by the company at any time and cannot be avoided by the company. Companies try to reduce the risk of economic turmoil by taking policies within the company including capital structure policies, cash use policies, investment policies and other policies that can have a good impact on the company in the event of economic turmoil.

Non-financial characteristics in each episode of economic turmoil provide different things where in this study are grouped in various episodes of economic turmoil that provide different results: a) When the economy experiences a decline or slowdown / contraction, from the estimation results it is found that labor has an effect on *corporate distress*, this shows that when the economy is sluggish or decreases the amount of labor will be a burden for the company because the costs incurred are not comparable to the income received by the company because of the decreased demand due to the economic downturn; b) When the economy experiences an increase or recovery, the characteristics of the company that affect the estimation results are company size and company experience can affect corporate distress. When the economy increases, competition will also increase where the growth and demand of the community becomes high causing competition to also become tighter, to win in the competition the company must have many assets and sufficient experience as one of the advantages that exist in the company. A large amount of assets can bring the company into difficulty if the management and use of these assets are not effective and efficient.

Economic turmoil, which is an economic cycle that occurs in a country, also has an impact on company development. The turmoil that occurs has a different impact on the company. This study shows that in a declining economy or contraction the number of workers is something that needs to be considered to reduce costs incurred in the company, this supports the life cycle theory where during a recession the company will tend to reduce its employees. (Widarwati & Haryono, 2018). When the economy is growing again (recovery), what the company needs to pay attention to is the investment that will be made by the company by adding assets because

when economic growth improves the company gets good profits which causes the company to make investments that may not be needed by the company so that it can become a burden in the future. In addition, experience, which is proxied by age, is also needed during a period of economic growth to win fierce competition with the establishment of new companies in the same field, demanding that companies must innovate to gain a *competitive* advantage (Liu et al., 2021). (Liu et al., 2021)

References

Agostini, M. (2018). Corporate Financial Distress: Going Concern Evaluation in Both International and U.S. Contexts. In *Corporate Financial Distress: Going Concern Evaluation in Both International and U.S. Contexts. https://doi.*org/10.1007/978-3-319-78500-4

Agrawal, K., & Maheshwari, Y. (2018). Efficacy of Industry Factors for Corporate Default Prediction. *IIMB Management Review.* https://doi.org/10.1016/j.iimb.2018.08.007

Agustia, D., Muhammad, N. P. A., & Permatasari, Y. (2020). Earnings management, business strategy, and bankruptcy risk: evidence from Indonesia. *Heliyon*, *6*(2), e03317. https://doi.org/10.1016/j.heliyon.2020.e03317

Ahmad, A., Bino, A., & Tayeh, M. (2021). Has the current global financial crisis significantly affected momentum profitability? *Cogent Business and Management*, *8*(1). https://doi.org/10.1080/23311975.2021.1932238

Akbar, M., Akbar, A., Maresova, P., Yang, M., & Arshad, H. M. (2020). Unraveling the bankruptcy risk-return paradox across the corporate life cycle. *Sustainability (Switzerland)*, *12*(9), 1-19. https://doi.org/10.3390/SU12093547

Akbar Rafatnia, A., Ramakrishnan, L., Fariha Binti Abdullah, D., Mohammadi Nodeh, F., & Farajnezhad, M. (2020). Financial Distress Prediction across Firms. *Journal of Environmental Treatment Techniques*, *8*(2), 646-651. http://www.jett.dormaj.com

Al-Hadi, A., Chatterjee, B., Yaftian, A., Taylor, G., & Monzur Hasan, M. (2019). Corporate social responsibility performance, financial distress and firm life cycle: evidence from Australia. *Accounting and Finance*, *59*(2), 961-989. https://doi.org/10.1111/acfi.12277

Altman, E. I. (1968). Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *The Journal of Finance*, *23*(1), 312-312. https://doi.org/10.1111/j.1540-6261.1974.tb00057.x

Altman, E. I. (2002). *Corporate Distress Prediction Models in a Turbulent Economic and Basel II Environment, Prepared for "Credit Rating: Methodologies, Rationale, and Default Risk." September*, London Risk Books.

Altman, E. I., Hotchkiss, E., & Wang, W. (2019). Corporate Financial Distress, Restructuring, and Bankruptcy. In *Corporate Financial Distress, Restructuring, and Bankruptcy.* https://doi.org/10.1002/9781119541929

Altman, E. I., Iwanicz-Drozdowska, M., Laitinen, E. K., & Suvas, A. (2017). Financial Distress Prediction in an International Context: A Review and Empirical Analysis of Altman's Z-Score Model. *Journal of International Financial Management and Accounting*, *28*(2), 131-171. https://doi.org/10.1111/jifm.12053

Amendola, A., Restaino, M., & Sensini, L. (2015). An analysis of the determinants of financial distress in Italy: A competing risks approach. *International Review of Economics and Finance*, *37*, 33-41. https://doi.org/10.1016/j.iref.2014.10.012

Andrei Shleifer, & Vishny, R. W. (1997). A Survey of Corporate Governance Andrei. *PhD Proposal*, *1*(2), 737-783.

Andries, P., & Stephan, U. (2019). Environmental innovation and firm performance: How firm size and motives matter. *Sustainability (Switzerland)*, *11*(13), 1-17. https://doi.org/10.3390/su11133585

Anthony, J. H., & Ramesh, K. (1992). Association between accounting performance measures and stock prices. A test of the life cycle hypothesis. *Journal of Accounting and Economics*, *15*(2-3), 203-227. https://doi.org/10.1016/0165-4101(92)90018-W

Appiah, K. O., Chizema, A., & Arthur, J. (2015). Predicting corporate failure: a systematic literature review of methodological issues. *International Journal of Law and Management*, *57*(5), 461-485. https://doi.org/10.1108/IJLMA-04-2014-0032

Ashraf, S., G. S. Félix, E., & Serrasqueiro, Z. (2019). Do Traditional Financial Distress Prediction Models Predict the Early Warning Signs of Financial Distress? *Journal of Risk and Financial Management*, *12*(2), 55. https://doi.org/10.3390/jrfm12020055

Asquith, P., Gertner, R., & David, S. (1991). Nber Working Papers Series Anatomy of Financial Distress: an Examination of Junk-Bonds. *The Quarterly Journal of Economics*, *109*(December), 38. http://www.nber.org/papers/w3942

Avramov, D., Chordia, T., Jostova, G., & Philipov, A. (2013). Anomalies and financial distress. *Journal of Financial Economics*, *108*(1), 139-159. https://doi.org/10.1016/j.jfineco.2012.10.005

Aziz, M. A., & Dar, H. a. (2006). Predicting Corporate Financial Distress: Where do We Stand? *Corporate Governance*, *6*((1) Doi: 10.1108/14720700610649436), 18–33.

Babina, T. (2020). Destructive creation at work: How financial distress spurs entrepreneurship. *Review of Financial Studies*, *33*(9), 4061-4101. https://doi.org/10.1093/rfs/hhz110

Barclay, M. J., & Holderness, C. G. (1989). Private benefits from control of public corporations. *Journal of Financial Economics*, *25*(2), 371-395. https://doi.org/10.1016/0304-405X(89)90088-3

Barney, J., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, *27*(6), 625-641. https://doi.org/10.1177/014920630102700601

Bauer, Péter; Edrész, M. (2016). Modeling bankruptcy using Hungarian firm-level data. *Econstor*.

Beard, J. W., & Sumner, M. (2004). Seeking strategic advantage in the post-net era: Viewing ERP systems from the resource-based perspective. *Journal of Strategic Information Systems*, *13*(2), 129-150. https://doi.org/10.1016/j.jsis.2004.02.003

Beaver, W. H. (1966). Financial Ratios as Predictors of Failure. *Accounting Research Center, Booth School of Business, University of Chicago Financial*, *4*, 71-111.

Beaver, W. H., Correia, M., & McNichols, M. F. (2010). Financial statement analysis and the prediction of financial distress. *Foundations and Trends in Accounting*, *5*(2), 99-173. https://doi.org/10.1561/1400000018

Bhutta, R. (2020). Predicting Corporate Bankruptcy: Lessons from the Past Predicting Corporate Bankruptcy: Lessons from the Past. *Asian Journal of Multidisciplinary Studies*, *8*(1), 3-10.

Blanco-Oliver, A., Irimia-Dieguez, A., Oliver-Alfonso, M., & Wilson, N. (2015). Improving bankruptcy prediction in micro-entities by using nonlinear effects and non-financial variables. *Finance a Uver - Czech Journal of Economics and Finance*, *65*(2), 144-166.

Blaylock, B., Shevlin, T., & Wilson, R. J. (2012). Tax avoidance, large positive temporary book-tax differences, and earnings persistence. *Accounting Review*, *87*(1), 91-120. https://doi.org/10.2308/accr-10158

Blums, M. (2003). *D-Score: A bankruptcy prediction model for middle market public firms*. 1-21. https://www.minneapolisfed.org/~/media/files/mea/contest/2004papers/blums.pdf?la=en

Bonsall, S. B., Bozanic, Z., & Fischer, P. E. (2013). What do management earnings forecasts convey about the macroeconomy? *Journal of Accounting Research*, *51*(2), 225-266. https://doi.org/10.1111/1475-679X.12007

Boubaker, S., Cellier, A., Manita, R., & Saeed, A. (2020). Does corporate social responsibility reduce financial distress risk? *Economic Modeling*, *91*, 835-851. https://doi.org/10.1016/j.econmod.2020.05.012

Brigham, E. F. (2014). *Financial management: theory and practice*.

Brigham F Eugene, daves R. P. (1989). Intermediate financial management. In *The British Accounting Review* (Vol. 21, Issue 3). https://doi.org/10.1016/0890-8389(89)90100-5

Campbell, J. Y., Hilscher, J., & Szilagyi, J. (2008). In search of distress risk. *Journal of Finance*, *63*(6), 2899-2939. https://doi.org/10.1111/j.1540-6261.2008.01416.x

Chang, T. C., Yan, Y. C., & Chou, L. C. (2013). Is default probability associated with corporate social responsibility? *Asia-Pacific Journal of Accounting and Economics*, *20*(4), 457-472. https://doi.org/10.1080/16081625.2013.825228

Chen, N., Ribeiro, B., & Chen, A. (2016). Financial credit risk assessment: a recent review. *Artificial Intelligence Review*, *45*(1), 1-23. https://doi.org/10.1007/s10462-015-9434-x

Cheng, C. H., Chan, C. P., & Yang, J. H. (2018). A Seasonal Time-Series Model Based on Gene Expression Programming for Predicting Financial Distress. *Computational Intelligence and Neuroscience*, *2018*(1), 1067350. https://doi.org/10.1155/2018/1067350

Chiaramonte, L., & Casu, B. (2017). Capital and liquidity ratios and financial distress. Evidence from the European banking industry. *British Accounting Review*, *49*(2), 138-161. https://doi.org/10.1016/j.bar.2016.04.001

CHOI, Y.-Y. (2021). Does Tax Avoidance Induce Earnings Persistence? An Empirical Study in Korea. *The Journal of Asian Finance, Economics and Business*, *8*(6), 759-767. https://doi.org/10.13106/jafeb.2021.vol8.no6.0759

Chordia, T., & Shivakumar, L. (2005). Inflation illusion and post-earnings-announcement drift. *Journal of Accounting Research*, *43*(4), 521-556. https://doi.org/10.1111/j.1475-679X.2005.00181.x

Christidis, A., & Gregory, A. (2012). Some New Models for Financial Distress Prediction in the UK. *SSRN Electronic Journal.* https://doi.org/10.2139/ssrn.1687166

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147

Christopoulos, A. G., Dokas, I. G., Kalantonis, P., & Koukkou, T. (2019). Investigation of financial distress with a dynamic logit based on the linkage between liquidity and profitability status of listed firms. *Journal of the Operational Research Society*, *70*(10), 1817-1829. https://doi.org/10.1080/01605682.2018.1460017

Coad, A., Holm, J. R., Krafft, J., & Quatraro, F. (2018). Firm age and performance. *Journal of Evolutionary Economics*, *28*(1), 1-11. https://doi.org/10.1007/s00191-017-0532-6

Crum, M. D., Sherony, B., & Rayome, D. (2015). Human capital and self-employment: The moderating effect of economic freedom. *International Journal of Entrepreneurship*, *19* (October 2019), 1-14.

Cui, X., Yao, S., Fang, Z., & Wang, H. (2021). Economic policy uncertainty exposure and earnings management: evidence from China. *Accounting and Finance*, *61*(3), 3937-3976. https://doi.org/10.1111/acfi.12722

D'Amato, A., & Falivena, C. (2020). Corporate social responsibility and firm value: Do firm size and age matter? Empirical evidence from European listed companies. *Corporate Social Responsibility and Environmental Management*, *27*(2), 909-924. https://doi.org/10.1002/csr.1855

Daily, C. M., & Dalton, D. R. (1994). Bankruptcy and Corporate Governance: The Impact of Board Composition and Structure. *Academy of Management Journal*, *37*(6), 1603-1617. https://doi.org/10.5465/256801

Dakhli, M., & De Clercq, D. (2004). Human capital, social capital, and innovation: A multi-country study. *Entrepreneurship and Regional Development*, *16*(2), 107-128. https://doi.org/10.1080/08985620410001677835

Damayanti Dwi Novita, K. R. (2020). The *Effect of Corporate Governance on Financial Distress in the Infrastructure, Utilities and Transportation Services Company Sector on the Indonesia Stock Exchange for the 2015-2017 Period*. *8*(3).

Darrat, A. F., Gray, S., Park, J. C., & Wu, Y. (2016). Corporate Governance and Bankruptcy Risk. *Journal of Accounting, Auditing and Finance*, *31*(2), 163-202. https://doi.org/10.1177/0148558X14560898

David Romer. (2018). ADVANCED MACROECONOMICS. In *The McGraw-Hill Series in Economics*.

Doumpos, M., Andriosopoulos, K., Galariotis, E., Makridou, G., & Zopounidis, C. (2017). Corporate failure prediction in the European energy sector: A multicriteria approach and the effect of country characteristics. *European Journal of Operational Research*, *262*(1), 347-360. https://doi.org/10.1016/j.ejor.2017.04.024

Drempetic, S., Klein, C., & Zwergel, B. (2020). The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *Journal of Business Ethics*, *167*(2), 333-360. https://doi.org/10.1007/s10551-019-04164-1

Du Jardin, P. (2017). Dynamics of firm financial evolution and bankruptcy prediction. *Expert Systems with Applications*, *75*, 25-43. https://doi.org/10.1016/j.eswa.2017.01.016

Du Jardin, P. (2016). A two-stage classification technique for bankruptcy prediction. *European Journal of Operational Research*, *254*(1), 236-252. https://doi.org/10.1016/j.ejor.2016.03.008

Egbunike, C. F., & Okerekeoti, C. U. (2018). Macroeconomic factors, firm characteristics and financial performance. *Asian Journal of Accounting Research*, *3*(2), 142-168. https://doi.org/10.1108/ajar-09-2018-0029

ElBannan, M. A. (2021). On the prediction of financial distress in emerging markets: What matters more? Empirical evidence from Arab spring countries. *Emerging Markets Review*, *47*(March), 100806. https://doi.org/10.1016/j.ememar.2021.100806

Fan, J. P. H., Huang, J., & Zhu, N. (2013). Institutions, ownership structures, and distress resolution in China. *Journal of Corporate Finance*, *23*, 71-87. https://doi.org/10.1016/j.jcorpfin.2013.07.005

Farooq, U., Jibran Qamar, M. A., & Haque, A. (2018). A three-stage dynamic model of financial distress. *Managerial Finance*, *44*(9), 1101-1116. https://doi.org/10.1108/MF-07-2017-0244

Farooq, U., & Qamar, M. A. J. (2019). Predicting multistage financial distress: Reflections on sampling, feature and model selection criteria. *Journal of Forecasting*, *38*(7), 632-648. https://doi.org/10.1002/for.2588

Fathi, E., & Jean-Pierre, G. (2001). Financial distress and corporate governance: an empirical analysis. *Corporate Governance: The International Journal of Business in Society*, *1*(1), 15-23. http://dx.doi.org/10.1108/14720700110389548

Fernández-Gámez, M. Á., Soria, J. A. C., Santos, J. A. C., & Alaminos, D. (2020). European country heterogeneity in financial distress prediction: An empirical analysis with macroeconomic and regulatory factors. *Economic Modeling*, *88*(xxxx), 398-407. https://doi.org/10.1016/j.econmod.2019.09.050

Ferreira, J. J., Azevedo, S. G., & Ortiz, R. F. (2011). Contribution of resource-based view and entrepreneurial orientation on small firm growth. *Cuadernos de Gestion*, *11*(1), 95-116. https://doi.org/10.5295/cdg.100185jf

Fitzpatrick, J., & Ogden, J. P. (2011). The detection and dynamics of financial distress. *International Review of Finance*, *11*(1), 87-121. https://doi.org/10.1111/j.1468-2443.2010.01119.x

García, C. J., Herrero, B., & Morillas, F. (2021). Corporate board and default risk of financial firms. *Economic Research-Ekonomska Istrazivanja*, *0*(0), 1-21. https://doi.org/10.1080/1331677X.2021.1909490

Geng, R., Bose, I., & Chen, X. (2015). Prediction of financial distress: An empirical study of listed Chinese companies using data mining. *European Journal of Operational Research*, *241*(1), 236-247. https://doi.org/10.1016/j.ejor.2014.08.016

Gomez-Mejia, L. R., Cruz, C., Berrone, P., & de Castro, J. (2011). The Bind that ties: Socioemotional wealth preservation in family firms. *Academy of Management Annals*, *5*(1), 653-707. https://doi.org/10.1080/19416520.2011.593320

Gorton, G., & Schmid, F. A. (2004). Capital, labor, and the firm: A study of German codetermination. *Journal of the European Economic Association*, *2*(5), 863-905. https://doi.org/10.1162/1542476042782260

Grant, R. M. (1991). The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation. *Knowledge and Strategy*, 3-24.

Seflidiana Roza
Business, Management and Economics Engineering, 2024 Volume 22 Issue 1, ISSN: 2669-2481 / eISSN: 2669-249X

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Grice, J. S., & Dugan, M. T. (2003). Re-Estimations of the Zmijewski and Ohlson Bankruptcy Prediction Models. *Advances in Accounting*, *20*(03), 77-93. https://doi.org/10.1016/S0882-6110(03)20004-3.

Gross, T., Kluender, R., Liu, F., Notowidigdo, M., & Wang, J. (2019). *The Economic Consequences of Bankruptcy Reform*. https://doi.org/10.3386/w26254

Habib, A., Costa, M. D., Huang, H. J., Bhuiyan, M. B. U., & Sun, L. (2020). Determinants and consequences of financial distress: a review of the empirical literature. *Accounting and Finance*, *60*(S1), 1023-1075. https://doi.org/10.1111/acfi.12400

Hansen, J. A. (1992). Innovation, firm size, and firm age. *Small Business Economics*, *4*(1), 37-44. https://doi.org/10.1007/BF00402214

He, Y., Xu, L., & McIver, R. P. (2019). How does political connection affect firm financial distress and resolution in China? *Applied Economics*, *51*(26), 2770-2792. https://doi.org/10.1080/00036846.2018.1558358

Hernandez Tinoco, M., Holmes, P., & Wilson, N. (2018). Polytomous response financial distress models: The role of accounting, market and macroeconomic variables. *International Review of Financial Analysis*, *59*, 276-289. https://doi.org/10.1016/j.irfa.2018.03.017

Hernandez Tinoco, M., & Wilson, N. (2013). Financial distress and bankruptcy prediction among listed companies using accounting, market and macroeconomic variables. *International Review of Financial Analysis*, *30*, 394-419. https://doi.org/10.1016/j.irfa.2013.02.013

Hillegeist, S. A., Keating, E. K., Cram, D. P., & Lundstedt, K. G. (2004). Assessing the probability of bankruptcy. *Review of Accounting Studies*, *9*(1), 5-34. https://doi.org/10.1023/B:RAST.0000013627.90884.b7

Hosaka, T. (2019). Bankruptcy prediction using imaged financial ratios and convolutional neural networks. *Expert Systems with Applications*, *117*, 287-299. https://doi.org/10.1016/j.eswa.2018.09.039

Hosseinzadeh, G., Kangarlouei, S. J., & Motavassel, M. (2014). Firms Characteristic and Firms Disclosure Quality in Firms Listed in Tehran Stock Exchange. *International Journal of Marketing & Business Communication*, *3*(1), 20-28.

Hsu, H. H., & Wu, C. Y. H. (2014). Board composition, gray directors and corporate failure in the UK. *British Accounting Review*, *46*(3), 215-227. https://doi.org/10.1016/j.bar.2013.12.002

Ibhagui, O. W., & Olokoyo, F. O. (2018). Leverage and firm performance: New evidence on the role of firm size. *North American Journal of Economics and Finance*, *45* (August 2017), 57-82. https://doi.org/10.1016/j.najef.2018.02.002

Jo, Blocher, & Lin. (2001). Prediction of Corporate Financial Distress: An Application of the Composite Rule Induction System. *The International Journal of Digital Accounting Research*, *1*(1), 69-85. https://doi.org/10.4192/1577-8517-v1_4

John, T. A. (2014). Accounting Measures of Corporate Liquidity, Leverage, and Costs of Financial Distress. *Financial Management Association International*, *22*(3), 91-100.

Johnson, S., Boone, P., Breach, A., & Friedman, E. (2000). Corporate governance in the Asian financial crisis. *Journal of Financial Economics*, *58*(1-2), 141-186. https://doi.org/10.1016/s0304-405x(00)00069-6

Kane, G. D., Velury, U., & Ruf, B. M. (2005). Employee relations and the likelihood of occurrence of corporate financial distress. *Journal of Business Finance and Accounting*, *32*(5-6), 1083-1105. https://doi.org/10.1111/j.0306-686X.2005.00623.x

Karami, G., Attaran, N., Hosseini, S. M. S., & Hossein, S. M. S. (2012). Bankruptcy Prediction, Accounting Variables and Economic Development: Empirical Evidence from Iran. *International Business Research*, *5*(8), 147-152. https://doi.org/10.5539/ibr.v5n8p147

Khalid, M., Abbas, Q., Malik, F., & Ali, S. (2020). Impact of audit committee attributes on financial distress: Evidence from Pakistan. *International Journal of Financial Engineering*, *07*(01), 2050005. https://doi.org/10.1142/s242478632050005x

Khoja, L., Chipulu, M., & Jayasekera, R. (2019). Analysis of financial distress across countries: Using macroeconomic, industrial indicators and accounting data. *International Review of Financial Analysis*, *66*(July), 101379. https://doi.org/10.1016/j.irfa.2019.101379

Kim, Jounghyeon. (2020). Determinants of Corporate Bankruptcy: Evidence from Chaebol and Non-Chaebol Firms in Korea. *Asian Economic Journal*, *34*(3), 275-300. https://doi.org/10.1111/asej.12218

Kim, Jungho. (2021). Innovation failure and firm growth: dependence on firm size and age. *Technology Analysis & Strategic Management*, *0*(0), 1-14. https://doi.org/10.1080/09537325.2021.1892622

Kliestik, T., Valaskova, K., Lazaroiu, G., Kovacova, M., & Vrbka, J. (2020). Remaining financially healthy and competitive: The role of financial predictors. *Journal of Competitiveness*, *12*(1), 74-92. https://doi.org/10.7441/joc.2020.01.05

Koh, S., Durand, R. B., Dai, L., & Chang, M. (2015). Financial distress: Lifecycle and corporate restructuring. *Journal of Corporate Finance*, *33*, 19-33. https://doi.org/10.1016/j.jcorpfin.2015.04.004

Kücher, A., Mayr, S., Mitter, C., Duller, C., & Feldbauer-Durstmüller, B. (2020). Firm age dynamics and causes of corporate bankruptcy: age dependent explanations for business failure. *Review of Managerial Science*, *14*(3), 633-661. https://doi.org/10.1007/s11846-018-0303-2

Lam, W. H., Yeoh, H. B., Lam, W. S., & Lai, J. X. (2020). Evaluation on the Financial Performance of Technology Companies in Malaysia with Zmijewski Model. *Malaysian Journal of Mathematical Sciences*, *14*(October), 81-92.

Lee, T. S., & Yeh, Y. H. (2004). Corporate governance and financial distress: Evidence from Taiwan. *Corporate Governance: An International Review*, *12*(3), 378-388. https://doi.org/10.1111/j.1467-8683.2004.00379.x

Lev, B., & Nissim, D. (2004). Taxable income, future earnings, and equity values. *Accounting Review*, *79*(4), 1039-1074. https://doi.org/10.2308/accr.2004.79.4.1039

Li, L., & Faff, R. (2019). Predicting corporate bankruptcy: What matters? *International Review of Economics and Finance*, *62*(February), 1-19. https://doi.org/10.1016/j.iref.2019.02.016

Li, X., Wu, X., & Tan, Y. (2021). Impact of special economic zones on firm performance. *Research in International Business and Finance*, *58* (June 2020), 101463. https://doi.org/10.1016/j.ribaf.2021.101463

Li, Y., Li, X., Xiang, E., & Geri Djajadikerta, H. (2020). Financial distress, internal control, and earnings management: Evidence from China. *Journal of Contemporary Accounting and Economics*, *16*(3), 100210. https://doi.org/10.1016/j.jcae.2020.100210

Li, Z., Crook, J., Andreeva, G., & Tang, Y. (2020). Predicting the risk of financial distress using corporate governance measures. *Pacific Basin Finance Journal*, 101334. https://doi.org/10.1016/j.pacfin.2020.101334

Liang, D., Lu, C. C., Tsai, C. F., & Shih, G. A. (2016). Financial ratios and corporate governance indicators in bankruptcy prediction: A comprehensive study. *European Journal of Operational Research*, *252*(2), 561-572. https://doi.org/10.1016/j.ejor.2016.01.012

Lipson, M. L., & Mortal, S. (2007). Liquidity and firm characteristics: Evidence from mergers and acquisitions. *Journal of Financial Markets*, *10*(4), 342-361. https://doi.org/10.1016/j.finmar.2006.09.004

Liu, B., Ju, T., Bai, M., & Yu, C. F. (Jeffrey). (2021). Imitative innovation and financial distress risk: The moderating role of executive foreign experience. *International Review of Economics and Finance*, *71*, 526-548. https://doi.org/10.1016/j.iref.2020.09.021

Loderer, C., Stulz, R., & Waelchlig, U. (2017). Firm rigidities and the decline in growth opportunities. *Management Science*, *63*(9), 3000-3020. https://doi.org/10.1287/mnsc.2016.2478

Magee, S. (2008). *The Effect of Foreign Currency Hedging on the Probability of Financial Distress*.

Mankiw, N. G., & Ghent, L. (2007). *Principles of Macroeconomics*. http://www.thomsonrights.com.

Manzaneque, M., Priego, A. M., & Merino, E. (2016). Corporate governance effect on financial distress likelihood: Evidence from Spain. *Revista de Contabilidad-Spanish Accounting Review*, *19*(1), 111-121. https://doi.org/10.1016/j.rcsar.2015.04.001

Miglani, S., Ahmed, K., & Henry, D. (2015). Voluntary corporate governance structure and financial distress: Evidence from Australia. *Journal of Contemporary Accounting and Economics*, *11*(1), 18-30. https://doi.org/10.1016/j.jcae.2014.12.005

Miller, D., & Friesen, P. H. (1983). Successful and Unsuccessful Phases of the Corporate Life Cycle. *Organization Studies*, *4*(4), 339-356. https://doi.org/10.1177/017084068300400403

Miller, D., & Shamsie, J. (1996). The resource-based view of the firm in two environments: The hollywood movie studios from 1936 to 1965. *Academy of Management Journal*, *39*(3), 519-543. https://doi.org/10.2307/256654

Mousavi, M. M., Ouenniche, J., & Tone, K. (2019). A comparative analysis of two-stage distress prediction models. *Expert Systems with Applications*, *119*, 322-341. https://doi.org/10.1016/j.eswa.2018.10.053

Muñoz-Izquierdo, N., Laitinen, E. K., Camacho-Miñano, M. del M., & Pascual-Ezama, D. (2020). Does audit report information improve financial distress prediction over Altman's traditional Z-Score model? *Journal of International Financial Management and Accounting*, *31*(1), 65-97. https://doi.org/10.1111/jifm.12110

Nasution, M. R. (2020). Shock Macroeconomics: Year 1998; 2008; 2020. *Akademi Edu*, *June*. https://doi.org/10.13140/RG.2.2.19490.45761

Nilasari, A. (2021). The Effect of Financial Performance, Risk Based Capital, Company Size and Macroeconomics on Financial Distress. *Journal of Business Economics and Entrepreneurship*, *10*(1), 55. https://doi.org/10.26418/jebik.v10i1.44793

Noga, T. J., & Schnader, A. L. (2013). Book-tax differences as an indicator of financial distress. *Accounting Horizons*, *27*(3), 469-489. https://doi.org/10.2308/acch-50481

Nouri, B. A., & Soltani, M. (2016). Designing a bankruptcy prediction model based on account, market and macroeconomic variables (Case Study: Cyprus Stock Exchange). *Iranian Journal of Management Studies (IJMS)*, *9*(1).

Nursiva, K., & Widyaningsih, A. (2020). Financial Distress In Indonesia: Viewed From Governance Structure. *Journal of Accounting and Finance Research*, *8*(2), 205-220. https://doi.org/10.17509/jrak.v8i2.27796

Nyitrai, T. (2019). Dynamization of bankruptcy models via indicator variables. *Benchmarking*, *26*(1), 317-332. https://doi.org/10.1108/BIJ-03-2017-0052

Ohlson A James. (1980). Financial Ratios and the Probabilistic Prediction of Bankruptcy. *Journal of Accounting Research*, *18*(1), 109. https://doi.org/10.2307/2490395

Onur, I., & Yelkenci, T. (2015). The Generalizability of Financial Distress Prediction Models: Evidence from Turkey. *Journal of Accounting and Management Information Systems*, *14*(4), 685-703.

Parker, S., Peters, G. F., & Turetsky, H. F. (2002). Corporate governance and corporate failure: A survival analysis. *Corporate Governance: The International Journal of Business in Society*, *2*(2), 4-12. https://doi.org/10.1108/14720700210430298

Parrotta, P., Pozzoli, D., & Pytlikova, M. (2014). Labor diversity and firm productivity. *European Economic Review*, *66*, 144-179. https://doi.org/10.1016/j.euroecorev.2013.12.002

Permatasari, D., Samsudin, A., & Komariah, K. (2019). Financial Distress Analysis with the ZMIJEWSKI Method. *Journal of Management and Business (JOMB)*, *1*(1), 74-87. https://doi.org/10.31539/jomb.v1i1.658

Piatt, H. D., & Piatt, M. B. (2002). Predicting corporate financial distress: Reflections on choice-based sample bias. *Journal of Economics and Finance*, *26*(2), 184-199. https://doi.org/10.1007/bf02755985

Platt, H., & Platt, M. (2008). Financial Distress Comparison Across Three Global Regions. *Journal of Risk and Financial Management*, *1*(1), 129-162. https://doi.org/10.3390/jrfm1010129

Priadi, R. A., Sinaga, B. M., & Andati, T. (2020). The *Impact of External and Internal Factors on Financial Distress of Manufacturing Companies Go Public in the Food and Beverage Sub-Sector in 2008-2017*. *6*(1), 96-105.

Rashid, A., Hassan, M. K., & Karamat, H. (2021). Firm size and the interlinkages between sales volatility, exports, and financial stability of Pakistani manufacturing firms. *Eurasian Business Review*, *11*(1), 111-134. https://doi.org/10.1007/s40821-020-00162-w

Ravi Kumar, P., & Ravi, V. (2007). Bankruptcy prediction in banks and firms via statistical and intelligent techniques - A review. *European Journal of Operational Research*, *180*(1), 1-28. https://doi.org/10.1016/j.ejor.2006.08.043

Rizaky, Z. A., & Dillak, V. J. (2020). Company Age Against Financial Distress Conditions (Study of Mining Companies in the Coal Mining Sub-Sector Listed on the Indonesia Stock Exchange for the 2015-2018 Period). *E-Prosiding of MAnagement*, *7*(2), 3210-3219.

Robert C, M. (1974). *On The Pricing of Corporate Debt: The Risk Structure of Interest Rates*. *29*(2).

Rose-Green, E., & Dawkins, M. C. (2000). The Association between Bankruptcy Outcome and Price Reactions to Bankruptcy Filings. *Journal of Accounting, Auditing & Finance*, *15*(4), 425-438. https://doi.org/10.1177/0148558X0001500403

Rose-Green, E., & Lovata, L. (2013). The Relationship between Firms' Characteristics in the Periods Prior to Bankruptcy Filing and Bankruptcy Outcome. *Accounting and Finance Research*, *2*(1), 97-109. https://doi.org/10.5430/afr.v2n1p97

Runyan, R. C., Huddleston, P., & Swinney, J. (2006). Entrepreneurial orientation and social capital as small firm strategies: A study of gender differences from a resource-based view. *International Entrepreneurship and Management Journal*, *2*(4), 455-477. https://doi.org/10.1007/s11365-006-0010-3

Sadono, S. (2000). *Macroeconomics*. King of the earth pressada.

Sarhaddi, M., Mansouri, F., & Faghani, M. (2021). *Comparing the predicative power of foreign adjusted bankruptcy through providing proposed model of bankruptcy in Iran*. *13*(1), 757-764.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students, Fifth edition, Prentice Hall*.

Schultz, E. L., Tan, D. T., & Walsh, K. D. (2017). Corporate governance and the probability of default. *Accounting and Finance*, *57* (April 2015), 235-253. https://doi.org/10.1111/acfi.12147

Sekaran, U., & Bougie, R. (2019). *Research Methods For Business: A Skill-Building Approach*.

Shetty, S. H., & Vincent, T. N. (2021). The Role of Board Independence and Ownership Structure in Improving the Efficacy of Corporate Financial Distress Prediction Model: Evidence from India. *Journal of Risk and Financial Management*, *14*(7), 333. https://doi.org/10.3390/jrfm14070333

Shridev, Suprable, K. R., & Krishnaprasad. (2016). Corporate governance and financial distress: Evidence from Indian companies. *International Journal of Economic Research*, *13*(7), 2587-2598.

Sudarsanam, S., & Lai, J. (2001). Corporate Financial Distress and Turnaround Strategies: An Empirical Analysis. *British Hournal of Management*, *12*(3), 183-199. http://onlinelibrary.wiley.com/doi/10.1111/1467-8551.00193/abstract

Sun, J., Li, H., Huang, Q. H., & He, K. Y. (2014). Predicting financial distress and corporate failure: A review of the state-of-the-art definitions, modeling, sampling, and featuring approaches. *Knowledge-Based Systems*, *57*, 41-56. https://doi.org/10.1016/j.knosys.2013.12.006

Tennyson, B. M., Ingram, R. W., & Dugan, M. T. (1990). Assessing the Information Content of Narrative Disclosures in Explaining Bankruptcy. *Journal of Business Finance & Accounting*, *17*(3), 391-410. https://doi.org/10.1111/j.1468-5957.1990.tb01193.x

Theodossiou, P. T. (1993). Predicting shifts in the mean of a multivariate time series process: An application in predicting business failures. *Journal of the American Statistical Association*, *88*(422), 441-449. https://doi.org/10.1080/01621459.1993.10476294

Thim, C. K., Choong, Y. V., & Nee, C. S. (2011). Factors affecting financial distress: The case of Malaysian public listed firms. *Corporate Ownership and Control*, *8*(4 D), 345-351. https://doi.org/10.22495/cocv8i4c3art3

Tsai, B. H., & Chang, C. H. (2010). Predicting financial distress based on the credit cycle index: A two-stage empirical analysis. *Emerging Markets Finance and Trade*, *46*(3), 67-79. https://doi.org/10.2753/REE1540-496X460305

Tucker, L., & Melewar, T. C. (2005). Corporate Reputation and Crisis Management: The Threat and Manageability of Anti-corporatism. *Corporate Reputation Review*, *7*(4), 377-387. https://doi.org/10.1057/palgrave.crr.1540233

Udin, S., Khan, M. A., & Javid, A. Y. (2017). The Effects of Ownership Structure on the likelihood of Financial Distress: An Empirical Evidence Article information: About Emerald www.emeraldinsight.com. *Corporate Governance: International Journal of Business Society*, *14*(4), 589-612.

Vance, C. M. (2012). The re-source-based view of the firm. *Journal of Management Inquiry*, *21*(1), 124. https://doi.org/10.1177/1056492611436225

Var, Bessler, D. A., & Leatham, D. J. (2013). *Aggregate Business Failures and Macroeconomics*. *XVI*(1), 179-202.

Vladan, P., Muminović, S., & Cvijanović, M. J. (2012). Adequateness of Applying the Zmijewski model on Serbian Companies. *Industrija, 40*(3), 25-39.

Wang, G., Chen, G., & Chu, Y. (2018). A new random subspace method incorporating sentiment and textual information for financial distress prediction. *Electronic Commerce Research and Applications*, *29*, 30-49. https://doi.org/10.1016/j.elerap.2018.03.004

Wang, Z.-J., & Deng, X.-L. (2006). Corporate Governance and Financial Distress: Evidence from Chinese Listed Companies. *The Chinese Economy*, *39*(5), 5-27. https://doi.org/10.2753/ces1097-1475390501

Wei, K. D., & Starks, L. T. (2013). *Foreign Exchange Exposure Elasticity and Financial Distress*. *2010*, 1-27.

Widarwati, E., & Haryono, T. (2018). How Does Human Capital's Impact to Cost of Financial Distress? *International Summit on Science Tekhnology and Human (ISETTH2019)*, 401-412.

Widhiadnyana, I. K. (2020). The effect of ownership structure on financial distress with audit committee as moderating variable. *International Research Journal of Management, IT and Social Sciences*, 128-137. https://doi.org/10.21744/irjmis.v7n1.830

Wijaya, S. V., & Anantadjaya, S. P. (2014). *Bankruptcy Prediction Model: An Industrial Study in Indonesian Publicly-Listed Firms During 1999-2010*. *3*(1), 13-41. http://papers.ssrn.com/abstract=2396807

Wruck, K. H. (1990). Financial distress, reorganization, and organizational efficiency. *Journal of Financial Economics*, *27*(2), 419-444. https://doi.org/10.1016/0304-405X(90)90063-6

Wu, L., Shao, Z., Yang, C., Ding, T., & Zhang, W. (2020). The impact of CSR and financial distress on financial performance-evidence from chinese listed companies of the

manufacturing industry. *Sustainability (Switzerland)*, *12*(17). https://doi.org/10.3390/SU12176799

Yim Juliana, M. H. (2005). A comparison of corporate distress prediction models in Brazil hybrid neural networks, logit models and discriminant analysis. *Nova Economia*, *15*(1), 79-93.

Zhang, W. (2014). R&D investment and distress risk. *Journal of Empirical Finance*, *32*, 94-114. https://doi.org/10.1016/j.jempfin.2015.03.009

Zhou, L., Tam, K. P., & Fujita, H. (2016). Predicting the listing status of Chinese listed companies with multi-class classification models. *Information Sciences*, *328*, 222-236. https://doi.org/10.1016/j.ins.2015.08.036

Zmijweski, M. E. (1984). Methodological Issues Related to the Estimation of Financial Distress Prediction Models. *Journal of Accounting Research*, *22*, 59-82.