EMERGENCE CORPORATE FINANCIAL DISTRESS IN EMERGING MARKET: EMPIRICAL EVIDENCE FROM INDONESIA STOCK EXCHANGE (IDX) 2004-2008

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ABSTRACT

Financial recovery is the most difficult in financial management. Therefore, this is important to study how a company in financially-distress can survive to rise up to a healthy financial condition (emergence financial distress). The research consists of 200 non financial companies which are listed on Indonesia Stock Exchange (IDX) for the period of 2004-2008. This study focuses on management of working capital. How a company fulfill its current liabilities, and its sources in current assets which shall be cashed at the short term period. By using Multinomial logit, we analyzed the probability a financially-distress company rise up to emergence financial distress or stay of the status of financial distress and what are financial indicators affect to a company in the status of Non Financial Distress tend to Financial Distress. Thus, the important thing is to determine financial ratios which can be an indicator to determine of emergence financial distress. We find a positive relationship between Profit, efficiency and emergence financial distress and a negative relationship between leverage and emergence financial distress.

Keywords: Emergence Financial Distress, Indonesia Stock Exchange (IDX), Multinomial Logit JEL Classification Codes: G 3

ABSTRAK

Pemulihan kondisi keuangan dari kesulitan menjadi baik merupakan hal yang paling sulit dalam manajemen keuangan. Oleh karena itu pengkajian ini sangat penting untuk dipelajari bagaimana suatu perusahaan yang sedang dalam kondisi financial distress dapat pulih kembali meningkat menjadi perusahaan yang mempunyai kondisi keuangannya menjadi sehat kembali (emergence financial distress). Penelitian terdiri dari dua atus perusahaan publik (yang bukan perusahaan jasa keuangan) yang terdaftar paa Bursa Efek Indonesia (IDX) untuk periode dari 2004 – 2008. Studi ini berfokus kepada manajemen modal kerja. Bagaimana suatu perusahaan memenuhi kewajiban kewajiban jangka pendek dan sumber dananya yang dapat dicairkan dalam jangka waktu yang pendek pula. Dengan menggunakan multinominal logit, kami melakukan analisa kemungkinannya dapat terjadinya perusahaan yang dalam status kondisi keuangan financial distress dapat bangkit menjadi perusahaan yang kondisi keuangannya sehat (emergence financial ditress) atau kemungkinan tetap dalam posisi financial distress dan menganalisa indikator keuangan apa yang mempengaruhi suatu perusahaan dalam status tidak sedang dalam kesulitan keuangan (Non Financial Distress) berubah menjadi kondisi status financial distress. Jadi hal yang paling penting adalah menentukan rasio-rasio keuangan yang dapat menjadi indicator untuk menetapkan bangkitnya perusahaan dari financial distress ke non-financial distress (emergence financial distress). Kami dapatkan ada hubungan yang positip antara besarnya laba, efisiensi dengan bangkitnya perusahaan yang dari financial distress ke Non-financial distress atau emergence financial distress, dan hubungan negatip antara besarnya hutang perusahan dengan emergence financial distress.

Kata kunci: Emergence Financial Distress, Indonesia Stock Exchange (IDX), Multinomial Logit JEL Classification Codes: G 3

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INTRODUCTION

Financial distress is the position where financial condition of the company between solvent and insolvent (Andrade and Kaplan, 1998). It is indicated that a company which minimum cash flow tend to phospone its obligation to pay its liabilities to the third parties such as: Suppliers, lenders etc. The financial distress is determined by the value of Debt Service Coverage (DSC). By following standard of World Bank if DSC ≤ 1.2 a company tends to make default payment. (Jeff Ruster, World Bank.1996). Then we make a prediction DSC ≤ 1.2 is financially-distress (FD) and a company which has a financial condition above 1.2 is non financial distress (NFD). In fact, many companies change their financial condition from NFD to FD or from FD to NFD at short term period. Therefore, it is important to know financial indicators affect to financial distress and also emergence financial distress. The research consist of 200 non financial companies which are listed on IDX between 2004-2008.

DATA AND METHODOLOGY

In this research, we use secondary data of audited report of financial statement (Non financial companies) from Indonesia Stock Exchange (IDX) for the period of 2004-2008. The change of DSC for the research period (2004-2008) which is emergence financial distress from status financial distress (FD) to be non financial distress (NFD) can be analyzed by four category are as follows:

The status 0 FD → FD
The status 1 FD→NFD(Emergence financial distress)
The status 2 NFD → NFD
The status 3 NFD →FD

The steps of corporate financial distress can be classified: A Company which is revenue decreased more than 20% is called Early Impairment, a company which is profit decreased more than 20% is called Deterioration, a company which is negative operational cash flow is called cash flow problem and a company which is out of the three classification is called Good financial condition.

Independent variables which are using in the analysis are: Profit, Current ratio, Efficiency, leverage, Retain Earning, Equity, Good Corporate Governance (GCG), Macro Economy Effect (MECO) and dummy variables of status financial condition: Deterioration (D1), Early Impairment (D2) and Good financial condition (D3).

The analysis is used multinomial logistic regression model due to nominal data to determine of the change which is qualitative data, where there are several alternatif to choose as a preference. In this case, financial condition can be changed FD – FD, FD – NFD, NFD – NFD and NFD – FD. In four category of logistic regression model can be analog as follows:

$$\ln\left(\frac{p_0}{p_1}\right) = z_0 = \hat{a}_0 + \hat{a}_0 X_2 + \hat{a}_0 X_3 + \ldots + \hat{a}_0 X_p$$

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In order to see the correlation between every variable to the status of financial condition (DSC), the analysis is done by reference cash flow problem, which is the major reason a company in financially-distress. The change of DSC which is determine as a dependent variable is analyzed of the period 2004-20005, 2005-2006, 2006-2007 and 2007-2008. Thus, every company has four change of DSC within the research period.

EMPIRICAL RESULT

The total 800 data of DSC exchange for the research period is analyzed by multinomial logistic which has a result as follows:

The status 0	110	FD → FD
The status 1	108	FD → NFD (Emergence financial distress)
The status 2	275	NFD → NFD
The status 3	111	NFD → FD

REMARKS

The status variable=1, means DSC has changed to Non Financial Distress (NFD) from Financial Distress (FD). The exchange (FD-NFD) is determined to be reference event. Table 1 indicates the result of logit 1: (3/1) or $\text{Ln}\left(\frac{p3}{p1}\right)$. The estimation indicates what is the probability exchange NFD-FD compare to FD-NFD. The intercept in table 1 indicate the constant – 4,08991 with p value 0.00 (very significant). This means $\text{Ln}\left(\frac{p3}{p1}\right)$ = -4,08991, when all of independent variables are zero. In another word the probability to be status 3 (NFD-FD) is 0,0164651 or 1,65% compare to the status 1 (FD-NFD).

Table 1. Multinomial Logistik Regression (Logistic Regression) of the Logit 1: (3/1)

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% CI Lower	95% CI Upper
Constant	-4,08991	0,735801	-5,56	0,000			
Profit	-1,99910	0,931256	-2,15	0,032	0,14	0,02	0,84
CR	-0,023298	0,0169092	-1,38	0,168	0,98	0,95	1,01
Eff	**-4,25315**	**2,63933**	**-1,61**	**0,100**	**0,01**	**0,00**	**2,51**
Lev	**11,3884**	**1,29402**	**8,80**	**0,000**	**88293,27**	**6989,28**	**1115379,69**
RE	**0,215959**	**0,390588**	**0,55**	**0,580**	**1,24**	**0,58**	**2,67**
EQ	**-0,851874**	**1,03513**	**-0,82**	**0,411**	**0,43**	**0,06**	**3,24**
MECO	-0,0534635	0,883933	-0,06	0,952	0,95	0,17	5,36
D1	-0,478315	0,575467	-0,83	0,406	0,62	0,20	1,91
D2	12,4747	11216,8	0,00	0,999	61621,29	0,00	*
D3	-1,58125	0,570167	-2,77	0,006	0,21	0,07	0,63

Cumulative Distribution Function

Logistic with location = 0 and scale = 1

x	P(X <= x)
-4,08991	0,0164651

Therefore, probability a company to be NFD is much higher than FD. The conclusion there are many varibales affect to the status of financial condition 3 (NFD-FD) such as: Profit, Efficiency, Leverage and dummy variable D3. If profit and efficiency high the risk (odd ratio) to be FD will be less compare to stay at NFD and if leverage high will affect to the status FD (odd ratio) will be higher. Another variable which affect to the status of NFD is dummy variable D3 is the status good financial condition. Hence, emergence financial distress can be done by having higher profit, efficiency and low leverage. By having the status good financial condition, of course will be hold a company in NFD.

Table 2. Multinominal Logistic Regressin (Logistic Regression) of Logit 2: (2/1)

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% CI Lower	95% CI Upper
Constant	0,503313	0,391639	1,29	0,199			
Profit	-0,194115	0,427213	-0,45	0,650	0,82	0,36	1,90
CR	0,0009645	0,0017949	0,54	0,591	1,00	1,00	1,00
Eff	**2,39743**	**1,40905**	**1,70**	**0,089**	**10,99**	**0,69**	**174,02**
Lev	**-2,57876**	**0,711297**	**-3,63**	**0,000**	**0,08**	**0,02**	**0,31**
RE	**1,33158**	**0,329826**	**4,04**	**0,000**	**3,79**	**1,98**	**7,23**
EQ	**1,02632**	**0,613562**	**1,67**	**0,094**	**2,79**	**0,84**	**9,29**
MECO	-0,536430	0,506442	-1,06	0,290	0,58	0,22	1,58
D1	-0,358506	0,361864	-0,99	0,322	0,70	0,34	1,42
D2	19,5129	11216,4	0,00	0,999	2,98084E+08	0,00	*
D3	-0,169735	0,322382	-0,53	0,599	0,84	0,45	1,59

Cumulative Distribution Function

Logistic with location = 0 and scale = 1

x	P(X <= x)
0,503313	0,623238

Table : 2 Indicates the result of logit 2: (2/1) or Ln $(\frac{p2}{p1})$. The estimation indicates what is the probability exchange NFD-NFD compare to FD-NFD. The intercept in table 2 indicate the constant 0,503313 with p value 0,199 (is not significant). This means when all independent variable are zero, probability the status 2 (NFD-NFD) is 0,6232 or 62,32%. The conclusion that probability a company stay at Non Financial Distress is still bigger than Financial Distress. The variables which are significant to hold a company stay at the status NFD: Efficiency, leverage, Retain Earning and Equity. By having high efficiency, retain earning and equity, a company can hold at the status of Non Financial Distress (NFD). On the other hand, high leverage tend to make a company can not hold the status of NFD. In this case, efficiency and leverage are the same as the result in Logit 1 which is significant to rise up FD to NFD.

Table 3. Multinominal Logistic Regression (Logistic Regression) of Logit 3: (0/1)

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% CI Lower	95% CI Upper
Constant	-2,37888	0,702302	-3,39	0,001			
Profit	-1,73985	0,845119	-2,06	0,040	0,18	0,03	0,92
CR	-0,0001981	0,0048424	-0,04	0,967	1,00	0,99	1,01
Eff	**-6,90807**	**2,54988**	**-2,71**	**0,007**	**0,00**	**0,00**	**0,15**
Lev	**11,3885**	**1,29402**	**8,80**	**0,000**	**88299,55**	**6989,78**	**1115459,05**
RE	**0,0184657**	**0,368839**	**0,05**	**0,960**	**1,02**	**0,49**	**2,10**
EQ	**-2,16876**	**0,997048**	**-2,18**	**0,030**	**0,11**	**0,02**	**0,81**
MECO	0,191137	0,781156	0,24	0,807	1,21	0,26	5,60
D1	-0,609190	0,540627	-1,13	0,260	0,54	0,19	1,57
D2	13,3430	11216,8	0,00	0,999	623465,54	0,00	*
D3	-1,68577	0,537239	-3,14	0,002	0,19	0,06	0,53

Cumulative Distribution Function

Logistic with location = 0 and scale = 1

x	P(X <= x)
-2,37888	0,0847974

Log-likelihood = -533,768

Test that all slopes are zero: G=999,543. DF=30, p Value=0,000

Table: 3 Indicates the result of logit 3: (0/1) or Ln $(\frac{p0}{p1})$. The estimation indicates what factors make probability a company stay at financial distress (FD-FD) compare to emergence financial distress (FD-NFD). The intercept in table 3 above indicate the constant – 2.3788 with p-value 0,001 (significant). This means Ln$(\frac{p0}{p1})$ = – 2,3788, when all of independent variables are zero, probability of the status 0 (FD-FD) is 0,08479 or 8,47%. The conclusion of a company will be stay at Financial Distress affected by Profit, Efficiency, Leverage and Equity. High profit, efficiency and equity will be affected to Emergence Financial Distress. On the other hand, by having high leverage tend to a company will stay at Financial Distress.

The result of logit 1, 2 and 3 indicate financial variables can predict a company rise up to a healthy financial condition from financial distress or emergence financial distress and avoid a company goes down to financial distress from non financial distress (NFD to FD).

The evidence emergence financial distress (FD-NFD) of a company in food industry of Indonesia Stock Exchange in 2007, indicates Debt Service Coverage (DSC) rised up to 1,23 from 0,93 in the previous year. This is because of an expansion business financed by revolving credit facilities which is only interest expense to be its liability and the principal roll over yearly basis. This makes financial burden is smaller compare to installment credit. In order to reduce foreign exchange risk, the company hedges all of foreign exchange exposure. By implementing foreign exchange risk management, the company's profit increased 60% from the previous year. Another strategy the company manages account receivable tightly. This indicates no long over due in aging period and a big number in current ratio can be cashed to cover current liabilities. Thus, high profit, low loan overdue and high efficiency can make financial condition change to emergence financial distress.

On the other hand, another company in shipping business, decreased in financial condition. It is indicated

by DSC goes down to 0,57 from 1,65 in the previous year (NFD-FD). The revenue increased 94% and gross profit also increased 300%. However, interest expenses increase 100% and foregin exchange loss increased more than 200% compare to the previous year, this is mayority because of derivative transaction. Its revenue in USD and its liabilities in various currencies such as: USD, JPY,SGD and GBP. In this case the company does not hedge all of financial exposure to protect foreign exchange risks but it makes contracts in derivative products such as: Non Deliverable Swap, where the company makes financial contracts by having gain or loss from the exchange of foreign curencies. The company finances its invetment by having term loan from the banks. This method makes its financial burden higher compare to revolving credit facility because the interest expense and principal due date at the same time, more over there is no hedging of foreign currencies and interest rate. Thus, even though revenue increased in fact the company is still having financial difficulties.

Apharmacitical company's DSC always above 1.2 during the research period of 2004-2008. It is indicated that the company maintain in a good financial condition (NFD-NFD). The company's revenue in various currencies: IDR, USD, CHF and Euro and its loan exposure match with its revenue. Thus, the company implement natural hedge to do the businesses. Another strategy that the company also tight in monitoring account receivable and no long over due in aging period. Thus, financial condition in accruel basis can be cashed as internally generated funds. Hence, a company can survive in non financial distress all the time by monitoring a good financial condition (dummy variable D3).

CONCLUSION REMARKS

Using Mulinomial Logit to analyzed emergence financial distress, we find a positive relationship between Profit, Efficiency and emergence financial distress and a negative relationship between leverage and emergence financial distress. In addition, retain earning and equity have a positive relationship and these are the most variables which affect to a company can hold in Non Financial Distress.

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