Capital Structure: New Evidence across the Broad Spectrum of State-Owned Enterprises Performance in Indonesia

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ABSTRACT

According to the theory of capital structure, excessive debt financing can result in default risk or bankruptcy, and liquidation. This study is an attempt to identify the impact of debt ratio on the performance of State-Owned Enterprises (SOEs). In order to achieve this, it surveyed 140 Indonesian SOEs and categorised them as healthy, less healthy and unhealthy based on their Return on Asset (ROA), Debt-to-asset (DA), Asset-to-Utility (AU) and Current Asset ratio (CR). With regards to specific financial indicators that can be utilised to differentiate the company based on their categorisation, ANOVA and discriminant analysis were employed. The results show that healthy companies (67%) tend to use debt financing more conservatively than the less healthy (22%) and unhealthy ones (11%). Additionally, less healthy companies were considerably more aggressive in utilising debt financing.

Keywords: ANOVA, capital structure, default risk, discriminant analysis, state owned enterprises

INTRODUCTION

Contemporary capital structure theory states amount of capital invested in a company can determine its success (Harris & Raviv, 1991). The management usually require a threshold or cut-off that determines its tolerance limits for capital structure policies. However, financial theorists still face difficulty in determining the ideal capital structure due to the differences in the company's financial policies (Zhang, 2008) which in turn are based on its company's size, characteristics, different sources of debts, level of debt risk, and amount of debt. Previous studies show companies generally have a high number of either obligation

or debt (Faulkender & Petersen, 2006; Pinglé, 1997; Whitetaker, 1999; Zhengwei, 2013). This circumstances can often result in liquidation or even bankruptcy among unhealthy companies.

The capital structures of Stated-Owned Enterprises (SOEs) have not been extensively studied (Dumitra & Andrei, 2014; Pinglé, 1997; Whitetaker, 1999; Zhengwei, 2013). The burgeoning number of studies in this field in the past two decades has partially satisfied that deficit, although the topic is still in its infancy. Hereby, a supply-side theory suggests that availability of external capital is necessarily important in corporate financing decisions. Faulkender and Petersen (2006) reveal that having a credit rating is positively associated with corporate leverage. They note that companies with credit rating can easily access the public debt market.

Identifying quantitative relationships regarding the effect of fundamental financial factors across a wide spectrum of SOEs would enhance our awareness of the importance of economy (Lioukas, Bourantas, & Papadakis, 1993). Studies on SOEs offer many policy recommendations based on selective experience and untested generalisations. Lioukas et al. (1993) argue that systematic attempts to measure the intensity of control and its relationship with determining its factors are scanty. Relationships assumed and, hence, policy prescriptions are seldom based on quantitative evidence.

Most of the literature on capital structure focuses on analysing stand-alone companies. Findings suggest determining the optimum capital structure of a group affiliation maybe difficult. Thereby, determining the effectiveness of capital structure in explaining the performance of SOEs is vital. Modigliani and Miller (1963) argue that optimal capital structure is supported by the existence of leverage. The value of leveraged firms in case of ceteris paribus circumstance equals unleveraged firms plus the value of debt tax shield (Zhengwei, 2013). On the other hand, the opposite of optimal capital structure comes from the assumption of information asymmetry. Here, company policies are actually driven by management discretion, in which asymmetrical information exists between manager and investors as the owner (Myers & Majluf, 1984). Utilising debt was no longer the first choice for the company. The management considers utilising internal funding first instead of external funding, followed by issuing equity to the public.

Majid, Sucherly and Kaltum (2016) use Altman Z-score model to examine the factors behind airlines facing bankruptcy in Indonesia. By employing financial ratios, namely working capital assets/total assets, retained earnings/total assets, earnings before interest and taxes/total assets, market value of equity/book value of total debt, and sales/total assets, they found a threshold level in identifying healthy and unhealthy companies in the aviation industry. They

note that the companies which had Z-score above 2.90 are considered healthy while those below 1.20 are unhealthy. Moreover, companies that had Z-score between 1.20 and 2.90 were classified as grey area. They found that Merpati Nusantara Airlines, an Indonesian SOE, is an unhealthy company and had experienced financial distress due to a shortage of capital and ineffective financial management. In effect, the study concludes that Poor management and inability of Chief Financial Officer (CFO) in balancing the capital structure therefore can threaten a company's   survivability.

The current study makes several important contributions to research on capital structure with respect to SOEs. First, it supports side theory in capital structure theory. Second, it contributes to empirical studies of SOEs in Indonesia. Third, this is the first paper that explores the classification of SOEs based on three categories in Indonesia, namely healthy, less healthy and unhealthy. This study suggests that microeconomic circumstance, namely fundamental information of financial ratios, are important to study Indonesian SOEs' performance.

This paper is organised as follows: Literature review in the first section discusses supporting theories and findings of major studies in developing the hypothesis. Research methodology is discussed in the second section, specifically data generation and statistical tool used in this study. Next, findings and discussion are presented while the final section summarises and concludes the paper.

LITERATURE REVIEW

Capital Structure in the Indonesian State-Owned Enterprises

Some financial thinkers assume that capital structure will contribute towards firm value while others state that it has nothing to do with firm value. Studies of capital structure which are based on market capitalism classify capital structure into two conditions, relevant and irrelevant (Jensen & Meckling, 1976; Kamaludin, Susena, & Usman, 2015; Modigliani & Miller, 1958, 1969; Ross, Westerfield, & Jordan, 2003). The view of relevant capital structure assumes that it has implications for the firm value. A contrarian view (that capital structure is irrelevant) states that it will have no impact toward firm value. These two views have been criticised by academicians or practitioners in the area of finance.

The subsequent development of capital structure theory in financial studies is commonly based on the capitalism relationships and agency framework. It has attracted the attention of many researchers to investigate more about this. Some findings also show a close relationship between business and politics. For example, in Malaysia, the close relationship between business and politics has been discussed and criticised by Faccio (2006); Gomez (2002); Gomez and Jomo (1998). Their studies reveal that political endorsement has a significant influence on the company, particularly on public listing restrictions, direct equity ownership, and controlling activity. Kamaludin (2010) reported the

same among Indonesian companies. He noted that most of the companies that have political supports in Indonesia had more aggressive capital structure strategy, and even their activities are mostly funded by debt. Fraser, Zhang and Derashid (2005); Johnson and Milton (2003) explained that most e Malaysian companies which had received strong political support ended up with more debts.

Some companies that have aggressive capital structure had faced the financial distress or even bankruptcy (Kamaludin et al., 2015). High debt leads to high financial risks as a result of poor financial management, with the company facing bankruptcy (Kamaludin & Pribadi, 2011; Kamaludin et al., 2015; Svendsen, 2003; Wiggins, Piontek, & Metrock, 2014). In the long term, high debt ratio will lead to companies experiencing financial distress due to their inability to fulfil their financial obligations (Whitetaker, 1999). In the banking industry, poor financial management tends to result in an increase in non-performing loans (Kamaludin, Darmansyah, & Usman, 2015). Whitetaker further reports that economic downturns tend to worsen the situation leading to liquidation and bankruptcy.

In order to asses financial condition of companies, several financial indicators are employed, namely return on assets (ROA), debt-to-equity ratio (DER), debt-to-assets (DA), assets-to-utility (AU), and current ratio (CR). These are indicators of the company's health - healthy, less healthy, or unhealthy. In reviewing the performance of China's SOEs and family owned-firms from 1999 to 2004, Ding, Zhang and Zhang (2008) utilised specific financial information such as return on asset, revenue per unit of cost, market-to-book ratio, total asset, age, admin sales and market sales. Their study revealed that family owned-firms achieved better performance compared with SOEs. Therefore, family owned-firms tend to perform better in terms of operating efficiency and profitability.

Furthermore, signalling theory emphasises on the importance of information released by the companies as an essential information for prospective investors (Brigham & Ehrhadt, 2005). Bhaird and Lucey (2010) pointed out that several fundamental information such as level of intangible activity, ownership structures, and the provision of collateral across industrial sectors as important determinants in explaining the capital structure in Irish small-medium enterprises. Nurazi, Kananlua and Usman (2015); Nurazi and Usman, (2015); Usman and Tandellilin (2014) report that the availability of information and the openness of companies regarding their current financial condition are essential. This will enable potential stakeholders to determine prospects of specific firms and market outlooks. Hence, information such as financial statements are important for prospective investors. This information relate to mandatory and voluntary disclosure documents, in which certain information like financial statement associated with the

The population of this study is all SOEs in the period of observation. Secondary data was used to analyse the outcome of this study. Data was obtained from archives and financial statements of SOEs from the Ministry of Stated-Owned Enterprises of Republic Indonesia.

The approach employed in this research are discriminant analysis and analysis of variance (ANOVA). As noted by Pardoe, Yin and Cook (2007), discriminant analysis is utilised in order to categorise data based values (codes) of a nominal dependent variable with two or more aspects. In reality, just in cases where the nominal dependent variables and independent variables are quantitative, the discriminant analysis should be utilised to predict the changes in the dependent variables (Dastoori & Mansouri, 2013). Dependent variables, also known as predictive variables, this study were combined to form new variables and a discriminant score. The new variable from that process is called the discriminant function, which is calculated based on the the dependent criterion of variables. Descriptive statistical analysis was used to describe characteristics of data. Data can be described through the mean, maximum, minimum and standard deviation value.

Mathematical terms, X1, X2,..., Xn, are supposed to be independent variables and Z is a multi-level (categorical) dependent variable. Therefore, in this study, discriminant analysis attempts to determine a linear function as follows:

$$Zi = \beta\alpha X_0 + \beta 1X_1 + \beta 2X_2 + \beta 3X_3 + \beta 4X_4.... + \beta nX_n \tag{1}$$

$$P\ (Z =_z \mid (X1,\ X2,\ X3,\ X4....Xn) = (x1,\ x2,\ x3,\ x4....xn) \tag{2}$$

The dependent variable consists of n levels or groups are aimed to attribute the new observations (X1, X2, X3, X4…, Xn) to one of these groups based on Z (the discriminant function). Beta coefficient (β) representing the share of each variable in the scoring function is chosen in a way that the resulting Z score from the above functions, to discriminate optimally between the groups. Additionally, the value of Zi is calculated in a way that the intervals between means (centroids) are at the maximum level in the two groups (Dastoori & Mansouri, 2013).

In order to describe the current condition of SOEs in Indonesia, several types of fundamental financial information are used. As pointed by Zhengwei (2013), the capital structure can be measured by either book value or market value. The analysis in this paper is restricted to ROA, CR, DER, DA, and AU as can be seen in Table 2.

Table 2
Definition of variables

Variable	Description of Variable	Formula
ROA	The calculation of Return on Assets (ROA) is used to analyse a company's ability to generate profits from its assets.	$ROA = \dfrac{\text{Net Profit}}{\text{Average Total Asset)}}$
CR	Current Ratio (CR) is one of the liquidity ratios to measure a company's ability to pay its short-term and long-term obligations. To gauge this ability, the current ratio considers the total assets of a company (both liquid and illiquid assets) relative to its total liabilities.	$CR = \dfrac{\text{Curent Asset}}{\text{Current Liabilities)}}$
DER	Debt-to-Equity (DER) is a debt ratio employed to measure a company's financial leverage. This ratio is calculated by dividing a company's total liabilities by its stockholders' equity. Debt-to-equity ratio indicates how much debt is utilised to finance a company's assets relative to the amount of value as represented in shareholders' equity.	$DER = \dfrac{\text{Total Liabilities}}{\text{Total Shareholders Equity)}}$
DA	Debt-to-Asset (DA) is one of debt ratios used to measure a company's financial leverage. It indicates the proportion of a company's assets that are being financed with debt, rather than equity. The ratio is also used to determine the financial risk of a business.	Total Debt to Total Asset = (Short-term Debt + Long-term Debt) / Total Asset
AU	Asset-to-Utility (AU) is a financial ratio that determines a company's ability to cover its debt obligations with its assets after all liabilities have been satisfied.	((Current value of total physical and monetary assets, excluding intangibles) - (Total current liabilities, excluding short-term liabilities)) / Total amount of outstanding corporate debt

Source: Brigham and Ehrhadt (2005); Kamaludin et al. (2015); Kamaludin and Indriani (2012); Ross et al. (2003)

RESULTS AND DISCUSSION

The Profile of State-Owned Enterprises in Indonesia

The performance of State Owned Enterprises (SOEs) fluctuates and some do not survive as a result of bankruptcy while some non-performing ones are merged. SOEs in similar industry groups are also experiencing highly frequent changes in terms of its capital structure compositions. It is commonly triggered by external factors including the macroeconomics and dynamism of industrial environment happening among the SOEs. Figure 1 is a profile of SOEs in Indonesia.
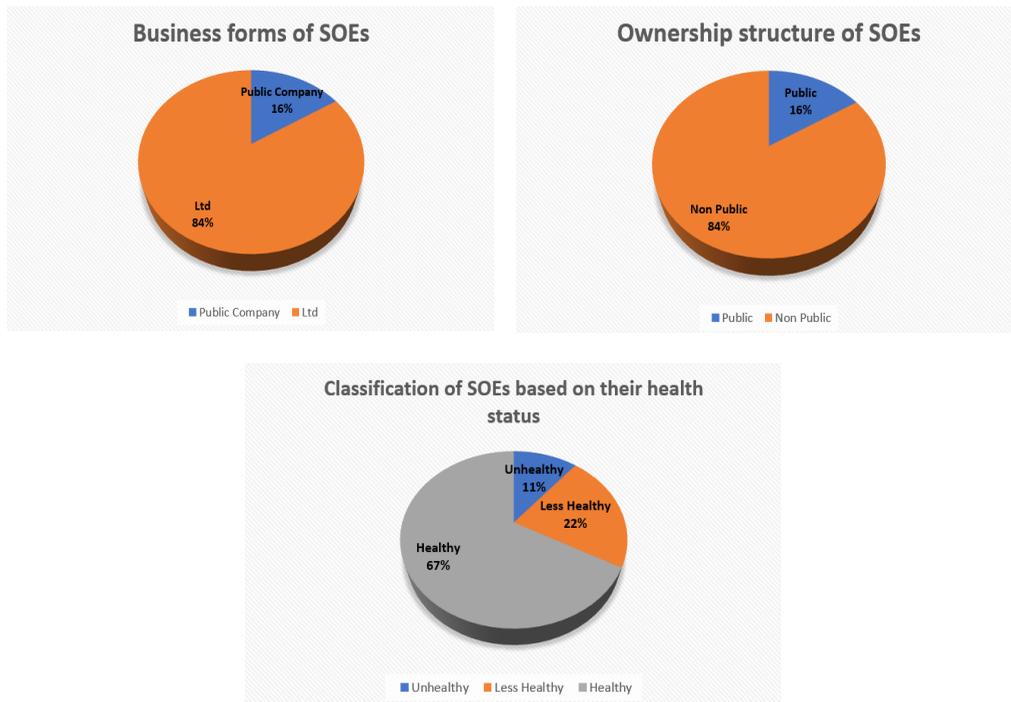
Figure 1. Categorisation of Indonesian SOEs from 2008 to 2013

Majority of the state-owned enterprises (84%) sampled are established as a limited liability company (Ltd) while the rest are a public company. In terms of specific ownership structure, the SOEs are predominantly owned by the government (84 percent) while the rest are owned by the public.

In 2013, there were approximately 140 SOEs in Indonesia. Not all of them were considered 'healthy'. According to data obtained, a healthy company is one which in the preceding year indicates a financial problem in the following year and turns into an unhealthy company. Dynamics within SOEs is a result of government policies, recent economic situations, and the growth

of industries (Wicaksono, 2008). This is also triggered by the downturn in the global economy, in which the SOEs that are listed in Indonesian capital market were also affected by global economic instability between 2008 and 2009 (Usman, 2016). Moreover, in Indonesia, SOEs are divided into 30 industrial groups (see Table 1). Data within the period of observation shows that all the industries except the banking sector, irrigation services, ports, airports, construction consultants, department, warehousing, insurance, fertiliser, trade, and certification have considerably experienced some issues in their financial management system.

Figure 1 shows that 67 percent of total SOEs between 2008 and 2013 were classified as healthy companies. 22 percent less healthy and is the rest unhealthy. The less healthy and unhealthy companies are in sectors such as plantation, forestry, fishery, supporting agriculture, cement, defence, manufacturing, docks, miscellaneous industries, paper, printing and publishing, media and several other industrial sectors. See Table 3 on the characteristics of the sample SOEs.

Table 3
Summary statistic of SOEs in the consolidated data

	ROA	DA	CR	AU	DER
Mean	0.041	0.752	2.871	0.768	9.907
Maximum	1.774	33.531	102.586	14.927	4259.761
Minimum	-1.391	-1.087	0.000	-0.085	-82.547
Std. Dev.	0.136	1.287	7.004	0.851	151.777

Table 3 shows the mean, maximum, minimum and standard devaluation of consolidated data of 140 SOEs. It can be seen the mean of ROA (Return on Asset) is around 0.041 where the maximum value is 1.774 and its minimum value is -1.391. Moreover, the mean of DA (Debt-to-Asset) also has a positive value as 0.752 on average, followed by its maximum value as 33.531 and its minimum value as -1.087. The CR (Current Asset) also shows a positive mean as 2.871 on average followed by 102.586 as its maximum value and 0 as its minimum value. The AU (Asset-to-Utility) has a positive mean value, 0.768 on average. Its maximum value is 14.927 followed by minimum value at -0.085. The last variable is DER (Debt-to-Equity) which shows positive value, 0.907 on average. This is followed by a maximum value of 4259.761 and minimum value at -82.547. The correlation among variables is shown in Table 4.

Table 4
Correlation among variables in the consolidated data

Variables	ROA	DA	CR	AU
ROA	1			
DA	-0.238**	1		
CR	0.056	-0.080*	1	
AU	0.234*	0.117**	-0.085*	1

Note: ** (Statistically significant at the 5% level)
* (Statistically significant at the 1% level)

As can be seen, several variables show negative and positive correlation. Even though the magnitude of the correlation among variables is moderate, a lack of high correlation values does not ensure the absence of collinearity as the combined effect of two or more variables. In particular, ROA and DA have shown a negative and significant correlation as -0.238 ($p < 0.05$). The same trend is noticed in the correlation between DA and CR as -0.080 ($p < 0.01$) and are followed by negative correlation displayed by CR and AU as -0.085 ($p <$

0.01). The positive sign is first reflected by the correlation between ROA and AU as 0.234 ($p < 0.01$). Second, it is performed by the correlation of DA and AU as 0.117 ($p < 0.05$) followed by the correlation between ROA and CR as 0.056.

Capital Structure of SOEs in Indonesia

The SOEs usually have a high debt ratio utility. This study found that not companies in the unhealthy category suffer from high debt ratio. However, high debt ratio in the healthy company is only a temporary setback. On the other hand, unhealthy companies tend to experience great difficulty in getting out of a high debt ratio. This circumstance will continue due to company policy to fund the operational activity by adding new debts. In the long term, the financial condition will worsen the situation leading to the inability of the company to balance the benefit of equity in order to fulfil its obligation.

According to the output of analysis, it is known that there is a specific difference in terms of capital structure among healthy, less healthy and unhealthy SOEs. This paper argues healthy companies incline to use conservative strategy for its funding activity, while less healthy and unhealthy companies employ the aggressive strategy. The high debt ratio in the short-term results in financial distress. This situation was experienced by Sang Hyang Seri Ltd, Rajawali Nusantara Indonesia Ltd, Sugar Ltd, and Leces Ltd. Moreover, the high debt ratio in the long term can lead to bankruptcy as experienced by Merpati Airline Ltd. This study supports the traditional view of capital structure theory, which states that by continuously increasing the size of debt, the firm value will decrease. Further, the higher the debt ratio, the more difficult it would be for the financial manager to manage the trade-off between benefits and cost in the capital structure (Frank & Goyal, 2011; Myers, 2001; Pinglé, 1997).

Table 5
The differentiation of capital structure based on its category

Dependent Variable: DA			Multiple Comparisons		
	(I) SOEs_Healths	(J) SOEs_Healths	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	Healthy	Less healthy	-0.291*	0.113	0.028
		Unhealthy	-1.404**	0.158	0.000
	Less healthy	Healthy	0.291*	0.113	0.028
		Unhealthy	-1.112**	0.181	0.000
	Unhealthy	Healthy	1.404**	0.158	0.000
		Less healthy	1.112**	0.181	0.000
Dunnett t (2-sided) a	Less healthy	Healthy	0.291*	0.113	0.020
	Unhealthy	Healthy	1.404**	0.158	0.000

The mean difference is significant at the 0.10 level *, 0.05 level ** and 0.01 level ***

Categories of SOEs are based on their performance; for example, the less healthy company is categorised as such due to its financial losses. The average current ratio of less healthy companies is 2.005 and its utility-to-assets is less than 1 (see Table 6), in which more than 80 percent of total asset is funded by debt financing activity. Meanwhile, unhealthy companies can be easily identified based on their losses for the consecutive years. This means the company has successively experienced negative equity, where the value of asset utility is less than 0.5 and current ratio performed the same financial indication with asset-to-utility. Table 6 contains descriptive data with respect to financial indicators of healthy, less healthy and unhealthy SOEs in Indonesia.

Table 6
Summary statistics of SOEs in Indonesia based on Three

SOEs_Health		Mean	Std. Deviation	Maximum	Minimum
Healthy	ROA	0.072	0.069	0.648	-0.087
	DA	0.589	0.531	8.576	0.000
	CR	3.333	7.338	102.586	3.998
	AU	0.825	0.905	14.927	0.000
Less healthy	ROA	-0.006	0.189	1.774	-0.439
	DA	0.881	0.601	3.761	0.012
	CR	2.005	6.838	79.863	0.004
	AU	0.667	0.683	3.590	-0.085
Unhealthy	ROA	-0.147	0.246	0.518	-1.391
	DA	2.025	3.955	33.531	0.001
	CR	0.376	0.385	1.541	0.020
	AU	0.453	0.499	2.261	-0.085

Table 6 shows summary statistics of companies based on their healthy classifications. In this study, the companies were classified based on the outcome of discriminant analysis. Data from 140 SOEs between 2008 and 2013 were analysed and from that, 94 SOEs (67%) were classified as healthy, 31 less healthy (22%) and 15 SOEs identified as unhealthy companies (11%). It is well known that healthy companies have low debt-to-asset (DA), and in this study, the lowest DA was 0.589 on average.

Discriminant Analysis

The output of discriminant analysis shows that not all variables are included. Not all the data of companies which showed negative equity and profits was included for analysis. Variable DER was also excluded in the discriminant analysis.

Moreover, the output of discriminant analysis in Table 7 illustrates that variable ROA, DA, CR, and AU are able to differentiate the companies as healthy, less healthy, and unhealthy. The DER however, is unable to distinguish healthy, less healthy

and unhealthy companies. This model has classifications accuracy of 83.6 percent. Thus, the model can be used to classify SOEs. Moreover, the inability of DER to classify the company based on is due to its negative equity. Thereby, the variable DER is marked by a negative value. This results in a bias mean of DER.

Table 7
Discriminant analysis outputse

Step	Entered	Wilks' Lambda							
						Exact F			
		Statistic	df1	df2	df3	Statistic	df1	df2	Sig.
1	ROA	0.784	1	2	838.000	115.438	2	838.000	0.000***
2	DA	0.712	2	2	838.000	77.414	4	1.674	0.000***
3	AU	0.695	3	2	838.000	55.506	6	1.672	0.000***
4	CR	0.684	4	2	838.000	43.741	8	1.670	0.000***

Notes: F-values. $*p < 0.10$, $**p < 0.05$, $***p < 0.01$.

The functions of discriminant Z_Score model are:

$$Z\_Score\_1 = 0.238 + 0.623_{ROA} - 0.413_{DA} + 0.035_{CR} + 0.294_{AU} \qquad (3)$$

$$Z\_Score\_2 = 0.012 + 0.400_{ROA} + 0.635_{DA} - 0.017_{CR} - 0.379_{AU} \qquad (4)$$

Z_Score_1 function is employed to classify SOEs as healthy or unhealthy, whereas the Z_Score_2 is utilised to classify SOEs as less healthy or unhealthy. The discriminant functions for each category are as follows:

$$Z\_Score\_Healthy = -1.712 - 0.037_{ROA} + 0.307_{DA} + 0.083_{CR} + 0.932_{AU} \qquad (5)$$

$$Z\_Score\_Less\_Healthy = -2.412 - 0.968_{ROA} + 0.590_{DA} + 0.046_{CR} + 0.704_{AU} \qquad (6)$$

$$Z\_Score\_Unhealthy = -3.323 - 0.949_{ROA} + 1.370_{DA} + 0.012_{CR} + 0.214_{AU} \qquad (7)$$

The above equation shows that the negative constant of unhealthy (-3.323) companies is relatively larger than the constant of healthy (-1.712) and less healthy companies (-2.412). This means hypothesis 1 is supported, in which fundamental financial information such as ROA, CR, DA, and AU are able to distinguish companies based on their categorisation of healthy, less healthy, or unhealthy. Furthermore, hypothesis 2 is supported where there is a difference of capital structure for the companies classified

in the healthy, less healthy, and unhealthy category. Additionally, there is a linear relationship among DA, CR, AU, and ROA. It means healthy companies tend to perform low DA and vice versa. In the case of SOEs in the category of healthy companies, it inclines towards higher liquidity and asset-to-utility.

Results of this study indicate long-term debt financing is negatively related to the ability of companies to manage their finances. The correlation results in Table 4 show debt-to-asset ratio (DA), as a debt measurement tool, is negatively associated with the current ratio (CR). Also, this condition is confirmed by the negative relationship between return on asset (ROA) and the debt-to-asset ratio (DA). On the other hand, the debt-to-asset ratio (DA) has positive correlation with the asset-to-utility ratio (AU). Thus, the study suggests effective financial management policies support company performance. Given that, most of the companies' policies increasingly employ the retained profits and debts for facilitating the future investment projects.

Based on panel data of Indonesian SOEs from 2008 to 2013, this study compared static and dynamic capital structures among SOEs in Indonesia in terms of 'health' status. It is imperative for Indonesian companies to improve their practice of good corporate governance (GCG) (Wicaksono, 2008). Wong (2004) showed that not only Indonesian SOEs are performing poorly (e.g., China, France, Singapore, the UK). Nurazi and Usman (2016) found that stated-owned banks performed slightly better than private ones in response to various fundamental and macroeconomic effect due to the support they receive from the government. However, Nurazi, Santi and Usman (2015) report that even though SOEs incline to have support from the government, but the SOEs itself have to be ready whenever the government needs financial support to strengthen the economic policies and economic expenditures made by the government. Therefore, we note that the lack of best practices and management of SOEs can be attributed to their three main challenges, namely objectives, agency issues and the transparency.

CONCLUSION

High debt ratio in the SOEs usually means an elevated risk of failure. This study found 33% of SOEs in Indonesia are less healthy and unhealthy characterised by their negative net income, debt funding more than 80 percent of the total equity, liquidity and the ratio of utility to assets which was less than 1. The SOEs categorised as unhealthy showed negative income and equity for the consecutive years based on their low value of liquidity and asset to liquidity (< 50 percent). Healthy company tended to, it was discovered, use debt financing more conservatively than less healthy and unhealthy companies. According to the results, less healthy companies were more aggressive in utilising debt financing. Therefore, ROA, DA, AU, and CR are able to measure the 'health' of a company.

There are several managerial implications regarding the best practices of

financial management among SOEs. First, though optimal capital structure is a well-known concept in corporate finance, most Chief Financial Officers find it a challenge to determine the optimal capital structure for their company. Further, according to Zhengwei (2013), financial managers find it difficult to treat state-owned enterprises (SOEs) and private enterprises equally. In this case, the financial planner should have the ability to create a balanced capital structure, which is expected to bring a positive impact on decision making in the process of determining the optimum capital structure. Second, SOE dependency on government funding should be minimised in order to push the former to be more creative in managing their financial policies to improve their performance.

The study has its limitations. First, the problem of data availability that is disclosed to the public is limited to any empirical study on utilizing more firms-specific variables and investigating the comprehensive performance of SOEs. Second, this study did not classify whether the sample is listed in the capital market or not. Therefore, there is heterogeneity in terms of institutional, financial and legal environment among the SOEs. The last limitation concerns the methodology used in this study. By looking at a larger sample size over a longer period, future research will be able to observe how SOEs turn from healthy to unhealthy.

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