The Difference of Capital Structure Based on Ownership, Variance, and Correlation: Venture Capital Firms in Indonesia

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Abstract

Most Small and Medium Enterprises (SMEs) and start up are widely viewed as unbankable and have various obstacles, such as weak management and lack of collaterals, in accessing funding sources. In Indonesia, venture capital (VC) is expected to become as an alternative mode of financing for SMEs and start up, hence VC firms’ capital structure is matters. The study aims to analyze the capital structure of VC firms in Indonesia using econometric model of ANOVA, difference test, and bivariate analysis test. This study is utilizing monthly financial statements for six years period (2009-2014) of 27 samples out of 58 VC firms total population in Indonesia. Debt to Equity Ratio (DER) is proxy for capital structure which is hypothesized severally correlated with Total Asset (TA), Return on Equity (ROE), Current Ratio (CR), Non-Performing Investment (NPI), and Earning Asset Ratio (EAR).

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The study finds that there is a variance of VC firms’ capital structure in Indonesia which is dominated by debt/loan rather than capital. Moreover, there is a significant difference of capital structure between government-owned VC firms and private VC firms where government-owned VC firms have a stronger capital structure (DER = 122.16%) compared to private VC firms (DER = 260.70). The study also reveals that asset size (TA), profitability (ROE), liquidity (CR), asset quality (NPI), and earning asset structure (EAR) respectively have a correlation to the capital structure (DER) of VC firms.

Keywords: Capital structure; Indonesia; SMEs; start up; venture capital.

1. Introduction

The funding for SMEs is not only from banks. Reference [1] stated that venture capital (VC) has the potential to become an alternative funding sources for start up and early stages as part of SMEs productive sectors. VC focuses on providing capital to companies that have growth prospects, value creation, and feasible although unbankable. In addition, References [2] and [3] stated that VC provides a model of entrepreneurship with equity, debt, or hybrid financing, usually with direct involvement in management.

VC typically invests in companies in early stage but having the capacity for rapid growth and supported by high-technology. Several well-known companies in the United States, Europe, Australia, and Asia were initially supported by VC firms, among others Google, Youtube, Apple, Wang Computer, eBay, Formula-1, Myer, Fitness First, Genentech, Kentucky Fried Chicken, Haagen Daz Ice Cream, IBM, HP, Intel, Lotus, Microsoft, Air Asia, Alam Maritim, and Burger King [4,5,6,7,8].

Reference [9] noted that VC firms play an important role in promoting entrepreneurs, hence in some countries the government supports the growth of VC industry. In Indonesia, VC firms are expected to be one of solutions for funding sources to the SMEs. For that purposes, VC firms should have strong capital structure. The capital structure is more important considering that the main activity of VC firms’ investment is in equity participation. It is not possible to invest in equity participation with the funding sources from short-term debts including bank loan since it will lead to the mismatch.

According to Otoritas Jasa Keuangan [OJK] (Financial Services Authority of Indonesia), the number of VC firms in Indonesia decreased from 89 in 2012 to 73 in 2013, 67 in 2014 and then to 58 in the second quarter of 2015. In addition, although total asset of VC industry in Indonesia is still growing but the composition of earning assets particularly equity participation (EP) portion is continuously decreased. In 2012, earning assets consist of 79% EP but in 2013 has been lowered to 68% and dropped to 14.5% in the second quarter of 2015. That condition indicates VC industry in Indonesia has certain problem. According to [10], profitability is one of the main issues that made companies to stay or leave the industry.

In terms of market share, total asset of VC industry is still small compared to non-bank financial institutions, such as multifinance industry. Reference [11] noted that multifinance industry’ assets grew 4.33 times in the last 10 years with total assets of IDR 420.4 trillion in 2014. While, VC industry only grew 2.17 times in the last 10 years with total assets is only 2.14% of multifinance industry. Total assets are essential for the firms as
indicators of size, financial strength, and operational activities. Therefore, well-established big firms may easier to access funding sources and capital market [12,13,14].

In the midst of that situation, many foreign-based VC firms with strong capital and funding sources enter the Indonesian market and invest in many start up business as well as e-commerce companies such as Gojek (Northstar Group, Sequoia Capital), tokopedia (Cyberagent Ventures, Softbank Internet and Media (Sequoia Capital), Berrybenka (East Ventures, Transcosmos, Gree Ventures), Scoop (Kompas Gramedia, Mitsui, Gobi Partners), Qraved (500 Startups, Rebright Partners, Convergence Ventures), Berrykitchen (East Ventures), Bilna.com (CyberAgent Ventures, East Ventures, DG) and Bukalapak (Afan, 500 startups, IREP, Gree Ventures) [15]. The domestic market and potential start up and SMEs could be taken over by foreign-based VC firms, if local VC firms failed to finance them due to some obstacles such as capital structure and funding sources problems.

For instance, previous studies in capital structure by [16,17,18,19,20,21,22,23] prevailed that there is a relationship between size and other financial determinants to the capital structure of certain industries in some countries. Additionally, the capital structure is also related to the corporate strategy to run the activities of the firms. However, the study about the VC firms’ capital structure in Indonesia has not been found.

1.1. Purpose of the Study

The study aims to analyze the capital structure of VC firms in Indonesia in order to know the variance of capital structure among VC firms, the difference of capital structure between government-owned VC firms and private VC firms, the relationship of certain financial parameters with the VC firms’ capital structure in Indonesia.

1.2. Significance of the Study

This study is expected could give benefits to the public, financial society, business and start up/SMEs as well as investors. In addition, the results of the study can be used by VC practitioners for planning and making decision related to financial aspects of the VC firms; by government, law maker, and financial authority to review policies related to the VC industry; and indeed for academic purposes to the literature, particularly capital structure and venture capital.

2. Literature Review

2.1. Venture Capital

Venture Capital (VC) is the capital invested in certain business (investee companies) within a specified period in order to earn return and gain [24,25,26,3,27,28]. According to [7,29,30], VC firms invest in seed, start up or early stages companies and the expansion phase together with involving in the management. Hence, the role of VC firms is not only for financing but also supporting the entrepreneurship.

2.2. Capital Structure
Capital structure is a mix of short-term debt, long-term debt, preferred stock and common stock combined to finance the company. The financial structure of firms is reflected by the composition of liabilities that describes the source of funds [31]. Reference [17] stated that the proportion of funding in the form of debt and equity capital in the company is defined as capital structure.

Reference [32] and [17] mentioned, there are several theories of capital structure as follows: (1) Traditional Approach Theory: the existence of an optimal capital structure; capital structure affect the value of the company; capital structure can change in order to obtain optimal business value; (2) [33] (MM Theory; 1958) or Irrelevance Capital Structure Theory: the theory argues that the capital structure is not affecting the value of company; (3) Pecking Order Theory (POT) [34]: the financing order starts from retained earnings, third-party debt or bond, and the last is new share issuance. Hence, [35] stated, the company with high profitability has a low debt due to abundant internal funding sources. (4) Trade-Off Theory (TOT) [36,37]: there is a choice (trade-off) between financial distress costs and tax savings (tax shields) that occur in the company. [38] found that companies with high profitability have a low debt ratio and it is contrary to TOT. (5) Asymmetric Information Theory and Signaling Theory. [39]: there is different information between internal parties (managers) and external parties (investors) about the prospects and risks of the company. [30]: an action taken by the management provides guidance and signal for investors on how to look at the prospects of the company. [40] stated that high prospect company will avoid the issuance of shares and tend to use debts. (6) Agency Theory: management is an agent of the owner, while the owner as principal delegates the authority to an agent to act based on interests of the owner. However, there is no guarantee that managers always act accordingly, therefore principal provides incentives for managers and supervise them with the consequences to the agency cost [32].

The researches in capital structure for different sectors in some countries have been published in recent years. In Indonesia, [41] released a paper about ownership and determinants capital structure of public listed companies using panel data analysis as well as a paper about the difference of capital structure among industry sectors in the Indonesia stock exchange [42]. Before that, [43] explored the capital structure in plantation companies in Indonesia particularly the factors that influence it. Analysis of capital structure in corporate telecommunication operators in Indonesia was investigated by [44], while a study in determinants of capital ratio on state-owned banks in Indonesia was published by [45]. Moreover, testing trade-off theory (TOT) of capital structure of Indonesian listed companies was investigated by [46], while testing on pecking order theory (POT) and analysis of company’s characteristic effects on emitten’s capital structure was inspected by [47]. However, studies concerning the capital structure of venture capital firms, particularly in Indonesia, have so far not been found.

2.3. Research Hypotheses

Hypotheses of the research are formulated to achieve the purpose of the study as well as based on theory or previous empirical research findings.

To investigate the variance of VC firms’ capital structure, the alternative hypothesis is:

\[ H_{A1} : \] There is a variance of capital structure among VC firms in Indonesia.
To investigate the difference of capital structure between government-owned VC firms and private VC firms, the alternative hypothesis is:

\( H_{A2} \) : There is a difference between government-owned VC firms and private VC firms.

To investigate the relationship between certain financial parameters respectively with VC firms’ capital structure, the alternative hypotheses are:

\( H_{A3} \) : There is a correlation between asset size and VC firms’ capital structure.

\( H_{A4} \) : There is a correlation between profitability and VC firms’ capital structure.

\( H_{A5} \) : There is a correlation between liquidity and VC firms’ capital structure.

\( H_{A6} \) : There is a correlation between asset quality and VC firms’ capital structure.

\( H_{A7} \) : There is a correlation between earning asset structure and VC firms’ capital structure.

3. Methods

This quantitative study is conducted in Indonesia, uses parametric statistical methods with econometric approach including analysis of variance (ANOVA-F test), difference (Z test), and correlation. The study utilizes secondary data of 27 samples out of 58 VC firms’ total population in Indonesia in the second quarter of 2015. Data collected from monthly financial statements for the period 2009-2014 in order to provide some financial ratios used in this study. In particular to investigate the difference of VC firms’ capital structure, the samples is grouped into 2 (two) categories which are 12 government-owned VC firms (>50% ownership) and 15 private VC firms. The capital structure uses debt to equity ratio/DER as proxy to measure capital structure for the variance of capital structure among VC firms, the difference of capital structure between government-owned and private VC firms, as well as the relationship between certain financial parameters respectively with VC firms’ capital structure. Beside DER, financial ratios used in this study are total asset/TA (as proxy of asset size), return on equity/ROE (as proxy of profitability; earnings after tax divided by total equity), current ratio/CR (as proxy of liquidity; current assets divided by current liabilities), non-performing investment/NPI (as proxy of asset/investment quality; total NPI divided by total earning assets), earning asset ratio/EAR (as proxy of earning asset structure; total earning asset divided by total asset).

4. Results and Discussion

4.1. Descriptive Statistics

Based on the result of data processing using SPSS, the study reveals that VC firms’ capital structure in Indonesia is on average 136.95% meaning that the total loan used for the company's operations is greater than the total capital owned by the companies. In addition, it is found that on average VC firms have total assets in the amount of IDR 40.82 billion, ROE 2.33%, CR 296%, NPI 17.15%, and EAR 89.57%.
4.2. The Variance of VC Firms’ Capital Structure in Indonesia

The ANOVA test was performed to investigate the variance of VC firms’ capital structure in Indonesia. The result is shown in Table 1.

Table 1: Result of ANOVA test

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>9213301.305</td>
<td>1</td>
<td>9213301.305</td>
<td>3.948</td>
<td>.047</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4532128744.991</td>
<td>1942</td>
<td>2333742.917</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4541342046.296</td>
<td>1943</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS output

The result shows that there is a variance of capital structure among VC firms in Indonesia as measured by the average value of DER with a significance value of 0.047 < 0.05. Therefore, the alternative hypothesis (H_{A1}) is not rejected.

The diversity of the capital structure among VC firms in Indonesia may be caused by differences in management policy related to the allocation of fund resources for the business activities which are derived from debt and equity. In other words, the VC firms by design have different ways to obtain as well as to utilize their funds. In contrary, the variance condition in VC firms’ capital structure can also caused by difficult circumstances where certain firms, for example, have a negative position in their equity due to some previous losses (suffering negative profit).

4.3. The Difference of VC Firms’ Capital Structure Based on Ownership

The Independent sample test was performed to investigate the difference of capital structure based on ownership (shareholding) that is between VC firms majority owned by the government and VC firms owned by non-government (private). The result is in Table 2.

The Table 2 shows that there is a significant difference of the capital structure between VC firms majority owned by the government and VC firms owned by non-government (private), with a significance value of 0.001 < 0.05. Therefore, the alternative hypothesis (H_{A2}) is not rejected.

The average capital structure (DER) for VC firms owned by the government is 122.16% (N = 864), while private VC firms is 260.70% (N = 1080). Therefore, the VC firms owned by the government have a better capital structure, hence a lower dependence on funds from external debt. This phenomenon also shows that there is a good support from the government to their affiliated VC firms in providing funding sources in the form of capital. In contrary, VC firms owned by non-government (private) should try harder to obtain funding from external sources to run their business.
Table 2: Result of difference test

<table>
<thead>
<tr>
<th>Klasifikasi</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>DER</td>
<td>1</td>
<td>1080</td>
<td>260.7047</td>
<td>2048.54065</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>864</td>
<td>122.1609</td>
<td>68.80007</td>
</tr>
</tbody>
</table>

Levene's Test for Equality of Variances

<table>
<thead>
<tr>
<th>F</th>
<th>Sig.</th>
<th>T</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>DER</td>
<td>10.579</td>
<td>.001</td>
<td>1.987</td>
<td>1942</td>
<td>138.54378</td>
<td>69.72779</td>
<td>1.79459</td>
</tr>
<tr>
<td></td>
<td>2.221</td>
<td>1082.042</td>
<td>.047</td>
<td>138.54378</td>
<td>62.37904</td>
<td>16.14620</td>
<td>260.94135</td>
</tr>
</tbody>
</table>

Source: SPSS output

Those results support the previous studies where the government in some countries plays an important role in supporting the VC industry in their respective countries. The studies by [48]; [49]; [50] in the United States and Canada; [51] in France; [52] in Brazil; [53] in Japan; [54] in China; and [55] in Malaysia, revealed that government provided supports in some ways in order to grow the VC industry in their respective countries. The government concerns among others are in the form of capital injection through VC firms devoted to SMEs and start up business, to provide the venture funds supported by the government bodies, and create a favorable regulatory support.

4.4. The Correlation Between Some Financial Parameters and VC Firms’ Capital Structure

The study uses bivariate analysis test was performed to investigate the relationship between some financial parameters and the capital structure of the VC firms. The tests with SPSS severally inspect the correlation between VC firms’ capital structure with total asset (TA), return on equity (ROE), current ratio (CR), non-performing investment (NPI), and earning asset ratio (EAR). The results are shown in Table 3.

This test aims to determine whether there is a relationship between some financial parameters with the capital structure of VC firms. Bivariate correlation analysis tests the relationship between two variables that theoretically can be: perfectly not correlated \( r = 0 \), perfectly correlated \( r = 1 \), or in between of the two
figures. The test results are shown in Table 3 above.

### Table 3: Result of bivariate analysis test

<table>
<thead>
<tr>
<th></th>
<th>DER</th>
<th>EAR</th>
<th>NPI</th>
<th>ROE</th>
<th>TA</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>DER</td>
<td>1.000000</td>
<td>0.026521</td>
<td>0.004187</td>
<td>-0.036765</td>
<td>-0.001712</td>
<td>0.108776</td>
</tr>
<tr>
<td>EAR</td>
<td>0.026521</td>
<td>1.000000</td>
<td>0.269041</td>
<td>-0.013593</td>
<td>-0.055266</td>
<td>-0.124042</td>
</tr>
<tr>
<td>NPI</td>
<td>0.004187</td>
<td>0.269041</td>
<td>1.000000</td>
<td>0.036755</td>
<td>-0.373894</td>
<td>0.236029</td>
</tr>
<tr>
<td>ROE</td>
<td>-0.036765</td>
<td>-0.013593</td>
<td>0.036755</td>
<td>1.000000</td>
<td>-0.017282</td>
<td>-0.016141</td>
</tr>
<tr>
<td>TA</td>
<td>-0.001712</td>
<td>-0.055266</td>
<td>-0.373894</td>
<td>-0.017282</td>
<td>1.000000</td>
<td>-0.171209</td>
</tr>
<tr>
<td>CR</td>
<td>0.108776</td>
<td>-0.124042</td>
<td>0.236029</td>
<td>-0.001641</td>
<td>-0.171209</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: SPSS output

The correlation between Total Asset (TA) and DER shows that there is a negative relationship with \( r = -0.001712 \), so that the greater of total asset, the smaller of DER. Therefore, the alternative hypothesis \( (H_{A3}) \) is not rejected. This result supported the studies conducted by [32,56,57] mentioned that generally in developing countries, companies prefer equity as source of funds rather than debt. Moreover, the companies which have greater asset may tend to use the source of funds from the equity than debt, since bigger value of companies’ asset could attract the investors to funding the companies.

For relationship between Profitability (ROE) and DER, the results shows that there is a negative relationship with \( r = -0.036765 \), it means that the greater of the VC firm profitability, the smaller of DER. Therefore, the alternative hypothesis \( (H_{A4}) \) is not rejected. This result is consistent with the Pecking Order Theory (POT) as proposed by [30], that a company with high profitability tends to have a low debt due to a much of internal fund sources. The results supported by previous studies i.e. [32] and [58].

The correlation between Liquidity (CR) and DER shows that there is a positive relationship with \( r = 0.108776 \), it means that the higher of DER derived from debt would improve the company's liquidity. Therefore, the alternative hypothesis \( (H_{A5}) \) is not rejected. This supports the implementation of asset and liability management (ALMA) in business and finance in which the management may use the fund resources derived from debt (short-term) to meet the liquidity needs of the company, while for capital expenditure the management may use the equity (long-term) for their funding sources.

For relationship between Asset Quality which is proxied by Non-Performing Investment (NPI) and DER, the results shows that there is a positive relationship between NPI and DER with \( r = 0.004187 \). Therefore, the alternative hypothesis \( (H_{A6}) \) is not rejected. Meaning that NPI could become a reflection of financial risk management in which the lower NPI is resulted from a better risk management performance. It may attract new investors to invest and to provide a funding to the firms. For existing shareholders, a good performance of risk management (lower NPI) would encourage them to keep dividends as retained earnings to be reinvested in the companies.
The correlation between Earning Asset Ratio (EAR) and DER shows that there is a positive relationship with $r = 0.026521$, so that the higher of EAR, the greater of DER. Therefore, the alternative hypothesis ($H_A$) is not rejected. The results are caused by the fact that the biggest portion of VC financing to investee companies in Indonesia is dominated by the scheme of profit or revenue sharing about 70%, followed by equity participation 19%, and convertible bonds about 11% [10]. Most of VC firms’ portfolio is in short-term financing (not more than 3 years tenor) driven by sources of fund dominated by commercial debt/loans from banks and other institutions. Therefore, it is difficult for VC firms to provide a long-term financing such as equity participation.

5. Conclusions

SMEs including start up and early stage business generally have problems in accessing funding sources, particularly in the developing countries such as Indonesia. Most SMEs are considered unbankable, high risk, and having various obstacles such as weak management and lack of collaterals. Hence, VC is expected to become alternative solution by providing equity financing with a long-term tenor. Nevertheless, this study finds that there is a significant variance of the capital structure among VC firms in Indonesia with average DER is 136.95% (1.37 times). This result indicates that VC firms’ capital structure in Indonesia is majority derived from debt in which most VC firms currently use loans from banks and other sources to finance their business activities. The debt from banks or other creditors with a short-term tenor cannot be used by VC firms to finance their investee companies (SMEs and start up) in the form of equity participation. Equity participation is considered as the nature of venture capital which could give value proposition for the VC firms’ customers compared to other financial institutions.

In terms of ownership, there is a significant difference in the capital structure between the government-owned VC firms and private VC firms. The VC firms majority owned by the government (> 50% ownership) have a better capital structure with DER = 122.16% compared to private VC firms with DER = 260.70%. The bivariate analysis test reveals that there is a relationship between some financial parameters respectively and the capital structure of the VC firms. The tests severally confirms that there is a correlation between VC firms’ capital structure with total asset (TA), return on equity (ROE), current ratio (CR), non-performing investment (NPI), and earning asset ratio (EAR).

The paper is subject to the limitation in which the study only examines VC firms’ population (58 VC firms) in Indonesia which is registered in the Financial Services Authority (FSA) in the second quarter of 2015. Other VC firms (most of them are foreign-based) which are in fact operating in Indonesia at this time but not registered in the FSA are not included in this study.

6. Recommendations

It is recommended that to enhance the role of VC firms/VC industry in Indonesia, particularly as funding sources for SMEs and start up, the stakeholders including the government, the FSA, the law maker, the Association of Indonesian Venture Capital Firms (AMVI), as well as VC practitioners, are expected to undertake strategic steps and initiatives to operationalize the program of “the revitalization of venture capital in
Indonesia”. Action to be prioritized among others is to strengthen the capital of the VC firms through capital raising program. Furthermore, the establishment of venture funds through the mobilization of potential funding sources initiated and sponsored by the government is quite urgent to be realized. Simultaneously, the management of the VC firms has to do some efforts to improve the VC firms’ financial performance in order to increase the investors’ level of confidence.

It is suggested to conduct further researches related to other financial aspects of VC firms in Indonesia, such as soundness rating and risk profile. In addition, some aspects about the practices of Islamic VC in Indonesia, such as products and schemes, are interesting topics to investigate.

References


