

Optimal Capital Structure Analysis of Food and Beverages Sub-Sector Industry in Indonesia from 2008-2011: A Case Study

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Capital structure is the financial decision of every firm. Every firm must decide the optimal proportion of long-term debt and equity in order to have a maximum firm value. Optimal capital structure analysis can help firms to determine the optimal debt-to-equity ratio for a firm. A firm with the optimal capital structure will have a maximum firm value. Food and beverages sub-sector industry has an important role in Indonesia's economic growth. This industry has the contribution in gross domestic product (GDP) and included in the list of priority of industries development focus for the year of 2010 to 2014. By determining the optimal capital structure, the food and beverages companies in Indonesia can have the maximum firm value and therefore can attract the potential investors. To find the optimal capital structure, the author uses the Weighted Average Cost of Capital (WACC) approach. The author makes the scenario analysis of WACC at each debt ratio. The debt ratio which result the lowest possible WACC will be chosen as the optimal capital structure. For the year of 2008, the optimal debt-to-equity ratio is 0.16. Meanwhile, for the year of 2009 and 2010, the optimal debt-to-equity ratio is 0.00. In 2011, the optimal debt-to-equity ratio is 0.005. By taking the average of the four years period, the average optimal debt-to-equity ratio for food and beverages sub-sector industry is 0.04. Compared to the optimal condition, the actual average debt-to-equity ratio of the actual condition were not in the optimal condition. From the year of 2009 to 2011, the author finds that many of the companies have optimal debt-to-equity ratio of 0.00. This result can be occurred based on three possible causes. First, the food and beverages companies have high inventory turnover. Second, there are several companies which have negative operating income. Third, the cost of equity of the companies is already high. By adding debt to its capital structure, the WACC of the companies can be higher.

Field of Research: Finance

1. Introduction

1.1 Background

Gardner, Gowan and Moeller (2010) in Using Microsoft Corporation to Demonstrate the Optimal Capital Structure Trade-Off Theory provide a demonstration on optimal capital structure in Microsoft. In their research, they use WACC as the indicator in determining the optimal debt ratio.

In Indonesia, food and beverages sub-sector industry has an important contribution in economic growth. Minister of Industrial of the Republic of Indonesia (2011) stated that the food and beverages sub-sector industry has the important role in industry development, especially in the contribution of gross domestic product (GDP) of Non-Oil & Gas Industry in Indonesia. Moreover, the food and beverages sub-sector

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industry is included in the list of priority industry development focus of Indonesia for the year of 2010 until 2014. By maximizing the firm value, the food and beverages companies can achieve the maximum growth and increase the contribution to the economic development. Thus, in order to maximizing the firm value, the companies need to choose the optimal capital structure.

However, to achieve the optimal capital structure for food and beverages sub-sector industry in Indonesia, further research needed to be executed. This paper provides findings in determining the optimal capital structure for food and beverages sub-sector industry in Indonesia.

1.2 Problem Identification

The problem identification of this research is to answer several questions, which are:

- a. What is the average optimal debt-to-equity ratio for food and beverage companies' in Indonesia during 2008-2011?
- b. Was the actual debt-to-equity ratio of food and beverage companies in Indonesia during 2008-2011 has reached the optimal level?

1.3 Research Objectives

The purposes of this research are:

- a. To find the optimal debt-to-equity ratio for food and beverage companies' in Indonesia during 2008-2011.
- b. To examine whether the current debt-to-equity ratio of food and beverage companies in Indonesia during 2008-2011 has reached the optimal level or not.

1.4 Scope and Limitations

In terms of scope and limitation, the author makes a distinctive contribution rather than the previous research. Compared to the research in Microsoft, this research covers the industry-scale and longer time frame. This research is aimed to find the optimal capital structure for food and beverages sub-sector industry from 2008 until 2011. The author uses the audited annual financial report from food and beverages public listed companies at Indonesia Stock Exchange (IDX) from 2008 until 2011 as the samples. There are eleven companies which are used as the samples of this research. Below is the name the companies and its stock code:

- 1) PT. Akasha Wira International Tbk. (ADES)
- 2) PT. Cahaya Kalbar Tbk. (CEKA)
- 3) PT. Delta Jakarta Tbk. (DLTA)
- 4) PT. Indofood Sukses Makmur Tbk. (INDF)
- 5) PT. Mayora Indah Tbk. (MYOR)
- 6) PT. Multi Bintang Indonesia Tbk. (MLBI)
- 7) PT. Prasadha Aneka Niaga Tbk. (PSDN)

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- 8) PT. Sekar Laut Tbk.(SKLT)
- 9) PT. Siantar Top Tbk. (STTP)
- 10) PT. Tiga Pilar Sejahtera Food Tbk.(AISA)
- 11) PT. Ultrajaya Milk Industry & Trading Company Tbk. (ULTJ)

Actually, there is one more company which is listed in IDX from 2008 until 2011, which is PT. Davomas Abadi Tbk. But, because PT. Davomas Abadi, Tbk. has not reported its annual audited financial report for the year of 2011 yet to IDX, so this company is eliminated from this research. With the total of 11 companies, the size of samples is 44 samples.

1.5 The Importance of Problem Solving

The result of this research has the importance to several stakeholders, which are food and beverages sub-sector industry and the author of this research. For the food and beverages sub-sector industry, the optimal debt-to-equity ratio resulted from this research can be used as the references for the companies in determining their capital structure in the future. For the author, the result of this research can get the knowledge about how to decide the optimal proportion of debt and equity for food and beverages industry.

2. Literature Review

2.1 Capital Structure

According to Gitman (2009:546), capital structure is the fund raised from long-term debt and equity. An effective capital structure will result the low cost of capital and high net present value (NPV). Based on Damodaran (2001:483), equity refers to the type of financing which brings the share of the control of the company's management. The payment of equity is based on the residual cash flows of the firm and does not give tax advantage.

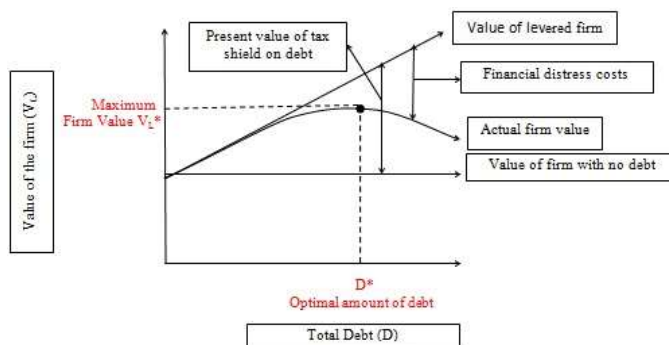
Meanwhile, debt is defined as the type of financing which has a claim on the firm's cash flow and has a maturity life to be paid. Debt gives tax advantage to the company by the interest expense. But, the debt itself brings the bankruptcy costs to the company.

2.2 The Static Theory of Optimal Capital Structure

According to Ross, Westerfield, Jordan (2008), the static theory of capital structure describes that the firms use an amount of debt until the tax benefit from debt equals to the financial distress cost. In this theory, the assets and operations of the firms are assumed to be fixed, while the debt-to-equity ratio changes.

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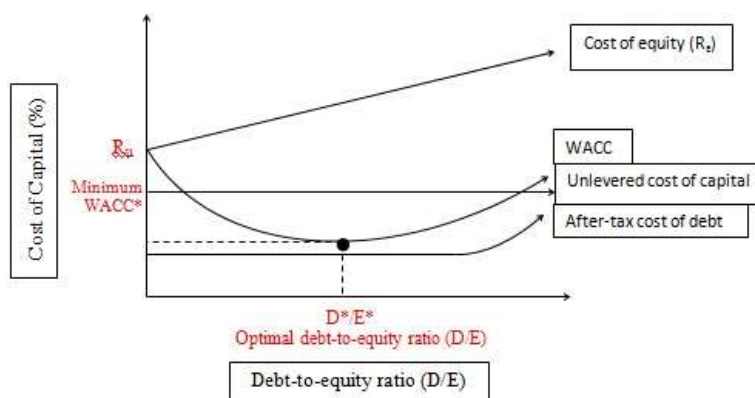
Figure 1: The Static Theory of Capital Structure: The Optimal Capital Structure and the Value of the Firm



Source: Ross, Westerfield, Jordan, 2008:570

From the figure above, it can be concluded that the actual firm value is occurred in an optimal amount of debt where the present value of tax shield on debt equals to the financial distress cost.

Figure 2: The Static Theory of Capital Structure: The Optimal Capital Structure and the Cost of Capital



Source: Ross, Westerfield, Jordan, 2008:571

From the figure above, it can be concluded that the weighted average cost of capital (WACC) declines because of the tax benefits. The minimum WACC occurred at the optimal debt-to-equity ratio. Then, the WACC will start to increase after the optimal debt-to-equity ratio because of the financial distress costs.

2.3 Weighted Average Cost of Capital (WACC) Approach

In this approach, the cost of capital is measured by taking the average weight of cost of equity (R_E) and cost of debt (R_D). Ross, Westerfield and Jordan (2008) describe the WACC formula as follows:

$$WACC = R_E (E/V) + R_D (D/V) (1-T)$$

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Based on Gitman (2006), the value of the firm can be calculated by using the simple valuation model below;

$$\text{Value of the firm} = [\text{EBIT} (1-T)] / \text{WACC}$$

2.4 Cost of Equity

According to Damodaran (2006:28), the cost of equity is the expected rate by the investors on an investment. In the other words, cost of equity also shows the riskiness of an investment. Based on Capital Asset Pricing Model (CAPM) method, the cost of equity depends on risk-free rate (R_f), levered beta (β_{levered}) and market risk premium ($R_m - R_f$). The equation of CAPM is stated as the formula below:

$$R_E = R_F + \beta_{\text{levered}} [E(R_m) - R_f]$$

Beta coefficient refers to the systematic risk of an asset. If Based on Damodaran (2001:577), in the CAPM, the beta of the assets has to be estimated relative to the market portfolio. To measure the levered beta, the author uses the formula as follows:

$$\beta_{\text{levered}} = \beta_{\text{unlevered}} [1 + (1-T) (D/E)]$$

The unlevered beta is affected by the current beta (β_{current}), tax (T) and actual debt-to-equity ratio (D/E) of the company.

$$\beta_{\text{unlevered}} = \beta_{\text{current}} / [1 + (1-T)(D/E)]$$

To estimate the current beta of the company each year, the author uses the formula based on Damodaran (2006:32), as expressed in the equation below:

$$\beta_i = \text{Cov}_{im} / \sigma_m^2$$

2.5 Cost of Debt

The cost of debt measures the cost that must be paid for a firm when they use debt as the part of its capital structure. Based on Damodaran (2006: 85-86), in making the scenario of cost of debt, we can use the long-term bonds outstanding rates. But, for the firms that are not rated, there are two alternatives, which are:

1. Use the default spread from recent borrowing history of the firm.
2. Estimate the cost of debt by using the synthetic rating. The synthetic rating will determine the cost of debt based on the financial ratio.

$$\text{Interest coverage ratio} = \frac{(\text{operating income} + \text{lease expense})}{(\text{Interest expense} + \text{lease expense})}$$

The author uses the interest coverage ratio as the proxy to determine the bond rating.

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Table 1: Interest Coverage Ratios and Ratings

Interest Coverage Ratio	Rating	Typical Default Spread (%)
>12.5	AAA	0.35
9.50-12.50	AAA	0.50
7.50-9.50	A+	0.70
6.00-7.50	A	0.85
4.50-6.00	A-	1.00
4.00-4.50	BBB	1.50
3.50-4.00	BB+	2.00
3.00-3.50	BB	2.50
2.50-3.00	B+	3.25
2.00-2.50	B	4.00
1.50-2.00	B-	6.00
1.25-1.50	CCC	8.00
0.80-1.25	CC	10.00
0.50-0.80	C	12.00
<0.50	D	20.00

(Source: Damodaran, 2006:96)

When the bond rating has determined, the bond rating needs to be adjusted with the Indonesian Market Interest Rate.

Table 2: Indonesian Market Interest Rate

Bond Rating	Indonesian Market Interest Rate (%)
AAA	12.2
AAA	12.72
A+	13.24
A	13.76
A-	14.28
BBB	14.8
BB+	15.32
BB	15.84
B+	16.36
B	16.88
B-	17.4
CCC	17.92
CC	18.44
C	18.96
D	19.48

(Source: Nurhadi, 2007)

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The author notes that based on Damodaran (2006:68), the after-tax cost of debt will be the same with pre-tax cost of debt if the operating income is negative. Based on Damodaran (2001: 583), in the scenario analysis, when the interest expense is higher than operating income, the tax rate should be adjusted. Damodaran (2001:583) states the tax benefits formula as follows:

$$\text{Tax Benefit} = \text{Operating Income} \times \text{Tax Rate}$$

Then, the effective tax rate will be can be calculated by using the formula below:

$$\text{Effective Tax Rate} = \text{Tax Benefit} / \text{Interest Expense}$$

3. Methodology

In order to complete this research, there are seven steps needed to be executed. These steps are chosen based on the formal guideline of research. These steps are Problem Identification, Research Objectives, Literature Study, Research Design, Data Collection, Data Analysis, Conclusion and Recommendation.

Firstly, the author started by identifying the problem of the research. This step called as Problem Identification. Secondly, based on the problems identified by the research, the author made the research objectives. This step called as Research Objectives. These research objectives are expected to be the solutions of the research problem. After that, the author continued to Literature Study step. In this step, to solve the research objectives, the author gathered the supporting reference from books, journal and other academic references. Next, when the supporting academic references have gathered, the Research Design step needed to be executed. The author designed the steps needed to accomplish the research.

When the research design is complete, the author executed the Data Collection step. In this step, the author gathered the audited annual reports and other financial data needed to be analyzed according to the research objectives. Next, when the data have been collected, the author calculates the optimal debt-to-equity ratio as one of the research objectives. This step called as Data Analysis. In this step, the author also made comparative analysis of actual and optimal condition of debt-to-equity ratio. Finally, the Conclusion and Recommendation step will be executed. In this step, the author made the conclusion and recommendation based on the outcome from Data Analysis step, which are the optimal debt-to-equity ratio for food and beverages companies in Indonesia.

4. Discussions

The risk premium used in this research is the equity risk premium by Damodaran. The risk-free rate used in this research is the Bank of Indonesia's (BI) rate. The table below lists the risk-free rate and risk premium used for this research.

Table 3: Risk-Free Rate and Risk Premium in 2008-2011

Year	Rf (%)	Rm (%)
2008	8.67	7.20
2009	7.15	6.07
2010	6.50	6.07
2011	6.58	6.80

(Source: Tabulated data, Bank of Indonesia and Damodaran Online Home Page for Aswath Damodaran, 2012)

For the tax assumptions, the author uses the tax rate regulation from Indonesia. The table below lists the tax rate regulation from 2008 until 2011.

Table 4: Tax Rate Assumptions

Year	Taxable Income	Tax Rate (%)
2008	< IDR50 million	10
	IDR50 million- IDR100 million	15
	>IDR100 million	30
2009	(single tax rate)	28
2010	(single tax rate)	25
2011	(single tax rate)	25

(Source: Tabulated Data, Legislation of Republic Indonesia No.17 Year 2000 and No.36 Year 2008)

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4.1 Summary of Actual Capital Structure Analysis 2008-2011

Before calculating the optimal capital structure, the author has calculated the debt-to-equity ratio from actual capital structure of the industry each year.

Table 5: Actual Capital Structure 2008-2011

Company/Year	2008	2009	2010	2011	Company Average
ADES	0.00	0.99	1.22	0.71	0.73
CEKA	1.34	0.73	0.47	0.09	0.66
DLTA	0.00	0.00	0.00	0.00	0.00
INDF	0.85	1.04	0.55	0.08	0.63
MLBI	0.00	0.00	0.00	0.00	0.00
MYOR	0.60	0.44	0.74	0.90	0.67
PSDN	0.34	0.67	0.01	0.05	0.27
SKLT	0.31	0.21	0.16	0.12	0.20
STTP	0.00	0.00	0.00	0.15	0.04
AISA	0.39	0.55	0.52	0.36	0.45
ULTJ	0.13	0.12	0.14	0.07	0.11
Industry Average	0.36	0.43	0.35	0.23	0.34

4.2 Optimal Capital Structure Analysis Calculation

For this section, the author will explain the calculation by taking one of the samples, which is PT. Indofood Sukses Makmur, Tbk. in 2008.

4.2.1 Cost of Equity

The author uses the CAPM to calculate the cost of equity. The unlevered beta of PT. Indofood Sukses Makmur, Tbk. in 2008 is 0.2173. The table below lists scenario analysis of cost of equity of PT. Indofood Sukses Makmur, Tbk. in 2008 at each debt ratio.

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Table 6: Scenario Analysis of Cost of Equity of PT. Indofood Sukses Makmur, Tbk. in 2008

Debt Ratio (%)	D/E	Levered Beta	Re (%)
0	0.00	0.75	14.07
5	0.05	0.78	14.26
10	0.11	0.81	14.49
15	0.20	0.85	14.82
20	0.25	0.88	15.01
25	0.33	0.92	15.33
30	0.43	0.97	15.69
35	0.54	1.03	16.10
40	0.67	1.10	16.59
45	0.82	1.18	17.16
50	1.00	1.27	17.84
55	1.22	1.39	18.68
60	1.50	1.54	19.73
65	1.86	1.72	21.08
70	2.33	1.97	22.88
75	3.00	2.32	25.40
80	4.00	2.85	29.18
85	5.67	3.72	35.48
90	9.00	5.47	48.08
95	19.00	10.72	85.87
99	99.00	52.71	388.21

4.2.2 Cost of Debt

In order to calculate the cost of debt, the amount of total capital Earnings Before Interest and Taxes (EBIT), tax rate and the maximum tax benefit need to be determined first. The amount of total capital, EBIT, tax rate and maximum tax benefit of PT. Indofood Sukses Makmur, Tbk. in 2008 was IDR 15,693,259 million, IDR4,341,476 million, 30% and IDR1,302,413 million. After the data have been gathered, the next step is to calculate the after-tax cost of debt at every debt ratio.

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Table 7 : Scenario Analysis of Cost of Debt of PT. Indofood Sukses Makmur, Tbk. in 2008

<i>Debt Ratio (%)</i>	<i>Debt Amount (in million IDR)</i>	<i>Interest Expense (in million IDR)</i>	<i>Interest Coverage Ratio</i>	<i>Bond Rating</i>	<i>Rd (%)</i>	<i>T (%)</i>	<i>Rd (1-T) (%)</i>
0	-	-	∞	AAA	12.20	30	8.54
5	784,663	95,729	45.35	AAA	12.20	30	8.54
10	1,569,326	191,458	22.68	AAA	12.20	30	8.54
15	2,353,989	287,187	15.12	AAA	12.20	30	8.54
20	3,138,652	399,237	10.87	AA	12.72	30	8.90
25	3,923,315	519,447	8.36	A+	13.24	30	9.27
30	4,707,978	647,818	6.70	A	13.76	30	9.63
35	5,492,641	784,349	5.54	A-	14.28	30	10.00
40	6,277,304	896,399	4.84	A-	14.28	30	10.00
45	7,061,966	1,045,171	4.15	BBB	14.80	30	10.36
50	7,846,629	1,202,104	3.61	BB+	15.32	30	10.72
55	8,631,292	1,367,197	3.18	BB	15.84	30	11.09
60	9,415,955	1,540,450	2.82	B+	16.36	30	11.45
65	10,200,618	1,668,821	2.60	B+	16.36	30	11.45
70	10,985,281	1,854,315	2.34	B	16.88	30	11.82
75	11,769,944	1,986,767	2.19	B	16.88	30	11.82
80	12,554,607	2,119,218	2.05	B	16.88	30	11.82
85	13,339,270	2,321,033	1.87	B-	17.40	30	12.18
90	14,123,933	2,457,564	1.77	B-	17.40	30	12.18
95	14,908,596	2,594,096	1.67	B-	17.40	30	12.18
99	15,536,326	2,703,321	1.61	B-	17.40	30	12.18

4.2.3 WACC & Firm Value

When the cost of equity and cost of debt have been calculated in each debt ratio, then the WACC and firm value can be calculated. The net operating profit after tax (NOPAT) of PT. Indofood Sukses Makmur, Tbk. in 2008 was IDR3,093,033 million. The table below lists the scenario analysis of WACC and firm value of PT. Indofood Sukses Makmur, Tbk. in 2008.

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Table 8: Scenario Analysis of WACC & Firm Value of PT. Indofood Sukses Makmur, Tbk. in 2008

Debt Weight (%)	Equity Weight (%)	Rd (1-T) (%)	Re (%)	WACC (%)	Firm Value (in million rupiah)
0	100	8.54	14.07	14.07	21,606,105
5	95	8.54	14.26	13.98	21,741,071
10	90	8.54	14.49	13.89	21,877,734
15	85	8.54	14.82	13.88	21,896,227
20	80	8.90	15.01	13.79	22,039,305
25	75	9.27	15.33	13.81	22,004,385
30	70	9.63	15.69	13.81	21,911,917
35	65	10.00	16.10	13.96	21,763,345
40	60	10.00	16.59	13.95	21,785,994
45	55	10.36	17.16	14.10	21,555,317
50	50	10.72	17.84	14.28	21,275,121
55	45	11.09	18.68	14.51	20,949,418
60	40	11.45	19.73	14.77	20,582,669
65	35	11.45	21.08	14.82	20,501,742
70	30	11.82	22.88	15.14	20,077,681
75	25	11.82	25.40	15.21	19,976,741
80	20	11.82	29.18	15.29	19,876,811
85	15	12.18	35.48	15.68	19,387,497
90	10	12.18	48.08	15.77	19,271,095
95	5	12.18	85.87	15.86	19,156,082
99	1	12.18	388.22	15.94	19,065,055

At the debt ratio of 20%, the WACC has reached the lowest amount and therefore result the maximum firm value. Therefore, the debt ratio of 20% and equity ratio of 80% is determined as the optimum capital structure for PT. Indofood Sukses Makmur, Tbk. in 2008.

4.3 Summary of Optimal Capital Structure Analysis from 2008-2011

When the optimal debt-to-equity ratios of all companies from 2008 until 2011 have been determined, the author measures the average optimal debt-to-equity ratio for food and beverages industry.

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Table 9: Summary of Optimal Capital Structure Analysis 2008-2011

Company	Optimal Debt Ratio	Optimal (D/E)	WACC (%)	Firm Value (in million IDR)
ADES	0.00	0.00	16.46	(235,350)
CEKA	0.10	0.11	9.99	698,510
DLTA	0.10	0.11	10.17	688,456
INDF	0.20	0.25	13.79	22,039,305
MLBI	0.50	1.00	9.07	2,209,094
MYOR	0.10	0.11	10.28	2,351,789
PSDN	0.10	0.11	14.08	310,853
SKLT	0.00	0.00	9.29	53,627
STTP	0.05	0.053	9.69	212,061
AISA	0.05	0.053	10.15	779,797
ULTJ	0.00	0.00	13.56	(346,074)
Industry Average	0.11	0.16	11.50	2,614,734

From the data of table, the optimal debt-to-equity ratio in 2008 for food and beverages sub-sector industry is 0.16. From 2009 to 2010, the optimal debt-to-equity ratio is 0.00. For the year of 2011, the optimal debt-to-equity ratio is 0.0045. By taking the average, the optimal debt-to-equity ratio for food and beverages sub-sector industry is 0.04.

Compared to the actual capital structure, the debt-to-equity ratio in 2008 until 2009 was not in the optimal condition. In average, the actual debt-to-equity ratio from 2008 until 2011 was 0.34, when the average optimal debt-to-equity ratio is 0.04

Based on the research's result, the author finds that many of the companies have the optimal debt-to-equity ratio of 0.00, mostly in year 2009 until 2011. The author finds this result as an anomaly compared to the optimal capital structure theory.

There are three possible causes why the optimal debt-to-equity ratio of food and beverages sub-sector industry can be 0% :

1. Food and beverages companies tend to have high inventory turnover, so the total cash inflow received also tend to high. Because of the high cash inflow and operating income, the author concludes that even the companies do not use any long-term debt; the financial performance can still be maintained.
2. There are several companies which have negative operating income. It is clear that the companies with negative operating income should not use debt, because it can make the company's financial condition become worse.
3. The cost of equity of the companies was already high, so when the company adds debt to its capital structure, the weighted average cost of capital increases. So, it would be better for those companies to do not add debt to its capital structure.

5. Conclusions and Recommendations

5.1 Conclusions

By using the weighted average cost of capital (WACC) approach, the average optimal debt-to-equity ratio for food and beverage sub-sector industry in 2008 is 0.16. Meanwhile, from 2009 to 2010, the optimal debt-to-equity ratio for this industry is 0.00. In the year of 2011, the optimal debt-to-equity ratio is 0.005. In average, the optimal debt-to-equity ratio for food and beverages sub-sector industry from 2008 until 2011 is 0.04.

Compared to the actual condition of the companies from 2008 until 2011, the companies were not in the optimal condition according to the optimal capital structure analysis result. It is because the actual WACC is higher than the WACC resulted from the optimal condition. But, there are also several companies which were in the same proportion of debt and equity with their optimal condition, which are PT. Delta Djakarta Tbk., PT. Akasha Wira International Tbk., PT. Multi Bintang Indonesia, Tbk. and PT. Siantar Top Tbk.

The author finds that many companies, especially in the year of 2009 until 2011 have zero optimal debt-to-equity ratio. In the previous studies, the optimal debt-to-equity ratio always lies from 0 to 100. But, the author finds that the ratio also can be at zero with several causes. There are three possible causes why the companies would be better to not use debt. First, it is because the food and beverages companies having high inventory turnover and operating income. Second, there are several companies which have negative operating income. It is clear that those companies were better to not use debt since it can make the company's financial condition become worse. Third, the cost of equity of the companies is already high. By adding debt to its capital structure, the WACC of the companies can be higher. This additional conclusion has made the contribution as an incremental input for the previous studies.

5.2 Recommendation

According to the conclusions, the author made two recommendations:

5.2.1 Recommendation for Food and Beverages Sub-Sector Industry in Indonesia

The food and beverages companies can use the average optimal debt-to-equity ratio from 2008 to 2011 as the consideration for the future debt-to-equity ratio. But, there are several conditions that should be identified by a company before they determine the debt-to-equity ratio. First, for several companies which have negative operating income, they should not use debt, because it can make the financial condition of the company become worse. Second, most of the food and beverages companies have high inventory turnover and high operating income. High inventory turnover means that the company can have high cash inflow. The company with this condition should not use debt since they will be able to fund their business activities with their cash inflow and operating income. Third, the companies with high cost of equity should

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not also use debt as the financing tools. By adding debt to its capital structure, the WACC of the company can be higher.

5.2.2 Recommendation for Further Research

The further research can make the analysis of determinants of capital structure using regression analysis. The determinants of capital structure can be based on the financial ratios of the company as the research's sample.

5.2.3 Recommendation for Investors

For the investors, it is recommended to pay attention to the debt-to-equity ratio of the company. The company which has optimal debt-to-equity ratio will have maximum firm value. Thus, the investors should choose the company which has the optimal debt-to-equity ratio.

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