

## **Synergy Calculation of PT Perusahaan Gas Negara's Acquisition Plan toward PT Pertamina Gas**

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### **Abstract**

Recently, the Ministry of State Owned Enterprises (SOE) is assigned to form six holding companies. The holding companies are expected to increase the efficiency and funding ability of SOE. Prior to the holding companies forming, it is beneficial that the company with same business line should be merged first, to ensure that there will be no overlap of the operational activity. The government planned to merge PT Perusahaan Gas Negara Tbk and PT Pertamina Gas to increase efficiency of national natural gas management. Due to many negative opinions and a lot of disapproval from the stakeholders, the acquisition process is still suspended. According to those facts, the purpose of this research is to propose a recommendation toward the acquisition decision that will be beneficial as the analysis before establishing holding company in energy sector. The author use macro and micro environmental analysis, discounted cash flow valuation, and synergy calculation to determine whether the acquisition is beneficial or not. The financial data in this research are collected from the companies' annual report from the last 5 years. The result of this research is that there is value of synergy after the acquisition, in the amount of \$3,362,411,250. The value of synergy is built on the assumption that there will be operating synergy and financial synergy. The result of this research is the acquisition plan of PT Perusahaan Gas Negara toward PT Pertamina Gas is recommended to be conducted based from the synergy generated.

*Keyword: State Owned Enterprises; Acquisition; Merger; Discounted Cash Flow; Valuation; PT Perusahaan Gas Negara; PT Pertamina Gas; Synergy*

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## 1. Main text

### 1.1. Introduction

In 2016, the government is assigned to form six holding companies including infrastructure, mining, energy security, banking, toll roads and renewable energy. Holding company is a corporate that has voting control of one or more other corporations, and also has influence of their subsidiaries (Gitman, 2015). His intention is to increase the efficiency and funding ability of State Owned Enterprises so that they will be financially independent from the State Budget (APBN) and also to increase competitiveness level toward ASEAN Economic Community (MEA).

In order to form holding companies, the first step that government has to do is merging every State Owned Companies that have the same business line. The reason is any subsidiaries under the holding companies are not allowed to compete with other company in the same business line and also to ensure there is no overlap regarding the operational activities. Due to this requirement, one government agendas is to merge two State Owned Companies in gas sector, in order to increase efficiency of national natural gas management and also to reach the target of gas utilization rapidly. In line with the plan, the government also aims that the merger will reinforce “open access” policy about natural gas pipeline usage, which is stated on Regulation of the Minister of Energy and Mineral Resources 19/2009 about Business Activities of Natural Gas through Pipelines. The regulation states that every company must utilize transmission and distribution pipeline which can be used together (open access) in certain territory.

PT Perusahaan Gas Negara Tbk and PT Pertamina Gas are informed to be merged. PT Perusahaan Gas Negara Tbk, the largest natural gases transmission and distribution company in Indonesia, plans to acquire PT Pertamina Gas (PT Pertamina Gas). PT Pertamina Gas, the subsidiary of PT Pertamina, is a company which mainly active in gas trading, transportation, process, and distribution. President Director of PT Pertamina stated that PT Pertamina Gas and PT Perusahaan Gas Negara Tbk, are going to be merged in order to reduce competition between the two companies. However, after both companies are merged, PT Pertamina is planned to be the holding company in energy sector since its stocks are fully-owned by Indonesian government.

Corporate secretary of PT Perusahaan Gas Negara Tbk stated that they prefer to do acquisition rather than merger, as they already control most of Indonesia’s pipeline networks and also have enough capital to do the acquisition. By realizing the acquisition, both companies will be able to merge their open access pipeline network and then they could increase the development of Indonesia’s gas sector. Gas infrastructure will be managed more optimally if PT Pertamina Gas is acquired by PT Perusahaan Gas Negara Tbk as PT Pertamina can focus more on upstream sector in Indonesia, which is the oil exploration and lifting. PT Pertamina Gas will be focused more on downstream sector after it is acquired by PT Perusahaan Gas Negara. The downstream sector refers to the raw natural gas processing and purifying, and also distribution and marketing activity of the natural gas based products. The acquisition also could lead to the open access scheme, which will benefit both companies, as the efficiency of gas distribution will be increased and it will decrease the gas price.

Due to many negative opinions and a lot of disapproval, the acquisition is still suspended. Many analysts and shareholders of the company are still disagree with the acquisition plan, because they are afraid that the stocks’ price will be lowered after the acquisition. Meanwhile, the acquisition scheme also has to be continued prior to the process of forming holding companies that is issued to be done at the end of 2016. Moreover, the integration between PT Pertamina Gas and PT Perusahaan Gas Negara is forecasted to be able to decrease natural gas prices (Ministry of Energy and Mineral Resources, 2015). This research will calculate the value of synergy after acquisition, in order to give recommendations regarding the acquisition process to the stakeholders.

### 1.2. Research questions

- What is the firm value of PT Pertamina Gas and PT Perusahaan Gas Negara Tbk using discounted cash flow valuation method?



- What is the value of synergy created after the acquisition?
- Should the acquisition plan of PT Perusahaan Gas Negara Tbk toward PT Pertamina Gas be conducted?

### 1.3 Research objective

- To determine the value of PT Pertamina Gas and PT Perusahaan Gas Negara Tbk in year 2015 based on discounted cash flow valuation method.
- To estimate the value of synergy created and determine whether there is value of synergy after acquisition process between PT Pertamina Gas and PT Perusahaan Gas Negara Tbk.
- To recommend whether the acquisition of PT Perusahaan Gas Negara toward PT Pertamina Gas should be conducted or not.

## 2. Literature review

In order to conduct the research, several theories and formulas regarding the main topic which is merger and acquisition analysis are used. Additional theories such as macro environmental, micro environmental, and SWOT analysis are used to support this research. All of the theories will be combined in order to generate the output which is the recommendation whether the acquisition process should be done or not.

### 2.1. Macro environmental analysis

Macro environment or external environment are the areas outside the organizations that are typically could not be controlled by the management (Wheelen & Hunger, 2011). To conduct the macro environmental analysis, the analytical tool that being used is PESTEL Analysis. PESTEL analysis is a framework that is used to analyze the macro environmental conditions and situation of a company (Yuksel, 2012). In this research, the PESTEL analysis will be used only for the economic and industry scope such as inflation rate assumption.

### 2.2. Micro environmental analysis

Micro environment refers to the area where there is direct contact of business organization and can affect the activities of the business. Micro environment also known as internal environment (Wheelen & Hunger, 2012). The micro environmental analysis will be used to inform the strength and weaknesses of the company. Micro environmental analysis which have impacts for the merger and acquisition analysis are classified into 2 categories which are: Business Analysis and Financial Analysis.

### 2.3. Company valuation

Company valuation is the process to determine the value of company asset. Valuation is the process that link the risk and return to determine the value of an asset. To determine the value of asset at a given point in time, a financial manager uses the time value of money techniques and risk and return concepts. The value of asset in the company depends on the expected cash flow. Greater risk can be included into a valuation analysis by using a higher required return or discount rate. The valuation method that will be used in this research is Discounted Valuation Method.

#### 2.3.1 Discounted cash flow

In discounted cash flows valuation, the value of an asset is the present value of the expected cash flows on the asset, discounted back at a rate that reflects the riskiness of the cash flows (Damodaran, 2006). If the value from Discounted Cash Flow valuation is higher than current cost of investment, then it is a good opportunity for investment.

The formula of Discounted Cash Flow according to Damodaran (2006) is:

$$\text{Value of Firm} = \sum_{n=1}^{\infty} \left( \frac{\text{Expected Cash Flow}}{(1+r)^n} + \frac{\text{Terminal Value}}{(1+r)^n} \right) \quad (\text{Eq 1})$$

Below is the step to calculate value of firm of a company:

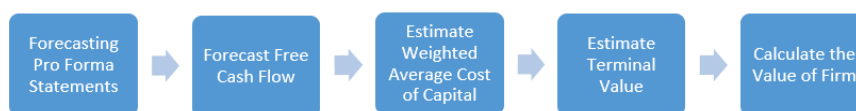


Figure 1. Calculation of Company Value

To calculate the discounted free cash flow, first estimate the Free Cash Flow and then estimate the Weighted Average Cost of Capital (WACC). The WACC will be used to estimate the terminal value which then can be used to calculate the value of the firm.

#### 2.4. Synergy

Synergy is the additional value that is generated by combining two firms which will create opportunities that will not be available if these firms operating independently (Damodaran, *The Value of Synergy*, 2005, p. 3). There are two types of synergies which are operating synergy and financial synergy. Operating synergies affect operations in the combined firm and include economies of scale, increasing pricing power and higher growth potential. The operating synergy will result higher expected cash flows. Financial synergy includes tax benefits, diversification, a higher debt capacity and uses for excess cash. The formula of synergy calculation is:

$$\text{Synergy} = V(A + B) - (V_A + V_B) \quad (\text{Eq 2})$$

### 3. Research methodology

Before conducting the research, the steps of research methodology are created. This framework is used to create more systematic research by sorting the step by step first from the problem identification process until generating the conclusion.

#### 3.1. Problem identification

The issue that is determined in this research is regarding the acquisition plan of PT Perusahaan Gas Negara Tbk toward PT Pertamina Gas that is still suspended due to many disagreement from the stakeholders. Meanwhile, the acquisition has to be continued prior to the process of forming holding companies that is issued by the government. Moreover, the integration between PT Pertamina Gas and PT Perusahaan Gas Negara is forecasted to be able to decrease natural gas prices.

#### 3.2 Research objective

According to the problem identification above, the goals of this research is to give recommendation whether the acquisition process should be done or not. After the valuation process, then the synergy between the acquisition plan of PT Perusahaan Gas Negara and PT Pertamina Gas will be calculated. After the calculation, then this research will draw the conclusion whether the acquisition should be done or not.

#### 3.3 Literature review

The methods and theories that are related with the research are determined in this step. The literature review that is used in this research is based on books, papers, and internet. The main sources for the literature review are "Note on Valuation Analysis for Merger and Acquisition" (2000) by the University of Virginia Darden School Foundation, *The Little Book of Valuation* (2010), and "The Value of Synergy" (2005) by Aswath Damodaran. The other book that is used is "Principles of Managerial Science" (2012) by Lawrence J. Gitman.

#### 3.4 Data collection

In this step, the data that will be needed to conduct the research is gathered. This research use secondary data



from companies' website and capital market data. The data that will be collected and analyzed in this research are:

1. Audited Annual Report of PT Perusahaan Gas Negara Tbk from the year 2010-2015
2. Audited Annual Report of PT Pertamina Gas from the year 2010-2014
3. Capital Market data of PT Perusahaan Gas Negara Tbk from the year 2010-2015
4. The Capital Market data of PT Pertamina Gas from the year 2010-2014

The data used is from the year 2010-2015 because in order to do company valuation, the minimum years are 5 years.

### 3.5 Data analysis

Before conducting data analysis, macro environmental analysis, micro environmental analysis, and SWOT analysis are conducted to generate any impacts for the merger and acquisition and also for any growth rate assumptions.

### 3.6 Conclusion and recommendation

In this step, all the results from the data analysis will be concluded. This step will also include the summary of the findings which is highlighted in the research questions including the recommendation.

## 4. Data analysis

Using the 8.3% Compounded Annual Growth Rate (CAGR), PT Perusahaan Gas Negara's enterprise value is \$11,022,786,272. Whereas, the Compounded Annual Growth Rate of PT Pertamina Gas is 13.61%, which generates enterprise value of \$3,605,178,264. This result shows that PT Perusahaan Gas Negara should acquire PT Pertamina Gas, as its value is higher than PT Pertamina Gas.

PT Pertamina Gas own key projects that could connect gas supplies in East Java-Central Java, which have not been owned by PT Perusahaan Gas Negara. Moreover, there are some overlap assets that could be synergized and they will have higher capability. Due to this condition, the merger could create competitive prices in the public which will lead to the higher sales growth of combined company. Using these assumptions, then operating synergies in form of higher sales growth and cost savings could occur in this acquisition. Using the assumptions that there will be operating synergy after PT Perusahaan Gas Negara acquired PT Pertamina Gas, then the new sales growth rate of combined company is adjusted to be 2.5% higher than no synergy, which is 11.48%. There will be cost savings in term of capital expenditure in the amount of \$1.7 billion according to the representative of PT Pertamina. Due to this condition, the cost of revenue is adjusted to be lower than before. There is also financial synergy in form of lower cost of capital. Using these assumptions, then the value of combined company will be \$17,990,375,786. This calculation shows higher enterprise value than the sum of both companies' if valued independently, which resulted in the value of synergy of \$3,362,411,250. The value of synergy is generated by subtracting the value of combined company with sum of the value of combined company if valued independently.

### 5. Conclusion and recommendation

Based on the data analysis in previous sections, there are synergy that will be created if PT Perusahaan Gas Negara acquire PT Pertamina Gas. The value of synergy is created based on the assumption that the new combined company will have higher sales growth rate, lower cost of revenue, lower cost of capital, and cost savings in capital expenditure compared with PT Perusahaan Gas Negara as stand-alone company. The assumption based on the analysis that the new combined company will be more efficient after merger, as PT Perusahaan Gas Negara could get natural gas directly from PT Pertamina, which is the parent company of PT Pertamina Gas. Besides, PT Perusahaan Gas Negara and PT Pertamina Gas' open access pipeline will be wider and could be used together. The complementary assets of both companies could be used together to reduce capital expenditure in the future. Moreover, the company is expected to have higher revenue growth synergy, as more competitive prices lead to the increasing sales growth in the future. Using Discounted Cash Flow valuation, the value of synergy between PT Perusahaan Gas Negara and PT Pertamina Gas is estimated to be \$3,362,411,250. As this research is limited only for the synergy calculation from financial perspective, the consideration from other specialization such as marketing, human resources, operations, and the others are also needed.

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## References

- **Journal articles**

*International Institute of Business Analysis*. (2008). Retrieved from What is Business Analysis?: <http://www.iiba.org/babok-guide/babok-guide-v2/babok-guide-online/chapter-one-introduction/1-2-what-is-business-analysis.aspx>  
*Undang-Undang Dasar RI 19/2003*. (n.d.). Republic of Indonesia.  
Yuksel, I. (2012). *International Journal of Business and Management*. Developing a Multi-Criteria Decision Making Model for PESTEL Analysis, 52-66.

- **Books**

Damodaran, A. (2005). *The Value of Synergy*. Stern School of Business.  
Damodaran, A. (2010). *Little Book on Valuation*. Stern School of Business.  
Gitman, L. (2015). *Principles of Managerial Finance 14th Edition*. Pearson Global Edition.  
Ross, S. A. (2013). *Corporate Finance*. Library of Congress Cataloging  
Soemarso. (2005). *Akuntansi Suatu Pengantar*  
Wheelen, T. L., & Hunger, J. D. (2012). *Strategic Management and Business Policy*. Library of Congress Cataloging.  
Wheelen, T., & Hunger, D. (2011). *Strategic Management and Business Policy*. Pearson.

- **Book chapters**

Damodaran, A. (2006). Chapter 4 Forecasting Cash Flows, 34.

Estrin, S., Meyer, K.E. and Bytchkova, M. (2006) 'Entrepreneurship in transition economies', in Casson, M. et al (Eds.), *The Oxford Handbook of Entrepreneurship*, Oxford University Press, Oxford, pp.693–725.

- **Ebooks**

Damodaran, A. (2012). Retrieved from <http://people.stern.nyu.edu/adamodar/pdfiles/country/relval.pdf>  
Ivey Richard. (2001). Note on Private Company Valuation. *Note on Private Company Valuation*  
Gitman, L. J. (2012). *Principles of Managerial Finance 13th Edition*.  
Söllner, B. (2009). Internal versus external growth of a company. *Internationale Betriebswirtschaft*, 11.

