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Huda, Syamsul and Hakim, Heikal Muhammad Zakaria

University of Singaperbangsa Karawang, Indonesia, University of
Singaperbangsa Karawang, Indonesia

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Feasibility Study of Company Investment on Public Cigarette Manufacturing Companies

Syamsul Huda¹, Heikal Muhammad Zakaria H²

^{1,2}University of Singaperbangsa Karawang

syamsul.huda@fe.unsika.ac.id

Abstract

The number of tobacco manufacturing companies is decreasing significantly, above 60 (sixty) companies on average every year. However, the cigarette companies contribute a significant amount to the state revenues, with an increase of more than 5 (five) trillion rupiah every year. Based on the data, we want to know the feasibility of investing in a cigarette company in the future. The method used includes four stages starting from data collection, data analysis, preliminary data processing, and concluding. We use three sample companies in this research: PT. Bentoel Internasional Investama Tbk, PT. Gudang Garam Tbk, and PT. HM Sampoerna Tbk. The results showed that based on the ROI, NPV, IRR, and BEP, PT. Gudang Garam Tbk. is the most feasible, followed by PT. HM Sampoerna Tbk, during PT. Bentoel Internasional Investama Tbk not feasible for investment.

Keywords : *investment feasibility, ROI, NPV, IRR, BEP*

1. Introduction

Economic conditions in a country can be categorized into two: developed and developing countries. Based on Tortado (1997), the general characteristics of developing countries are low life levels, low productivity, high growth rates, high dependency, high level of unemployment, dependence on agricultural, and export of raw products, and dependence and vulnerability in international relations. One of the factors that drive economic growth is business within a country. Businesses play an important role in absorbing employment and economic welfare figures of the country. Especially if viewed regarding income per capita, life expectancy, and education, business conditions are the most significant role in a country's economy. This is stated by the income per capita of society and life expectancy tends to be related to the work of society and its welfare in a country and the role of business in providing, absorbing and providing employment.

One of the industries engaged in the service sector, namely sector X, experienced significant growth. Even though these conditions can be seen as follow:

Table 1. Number of Tobacco Processing Industry

Tobacco Processing Industry		
No	Year	Number of companies
1	2008	1134
2	2009	1053

Tobacco Processing Industry		
No	Year	Number of companies
3	2010	981
4	2011	989
5	2012	945
6	2013	866
7	2014	862

Source: Indonesian Statistical Bureau (bps.go.id)

Based on Table 1 above, the number of tobacco manufacturing companies is significantly decreasing year after year with an average of over sixty companies each year. The number of companies was 1134 in 2008, 1053 in 2009, 981 in 2010, 989 in 2011, 945 in 2012, 866 in 2013, and 862 in 2014. It can be concluded that tobacco manufacturing companies are facing a crisis in their business movements.

Based on the KLBI (Standard Classification of Indonesian Business Fields) tobacco manufacturing industry is the principal group which includes the processing of tobacco or tobacco substitute products, such as cigarettes, cigars, cloves, snuffs, chewing, and tobacco cutting and re-drying, but it does not cover planting or initial processing of tobacco. There are several types of businesses, among others: cigarette industry and other tobacco products, kretek industry, white cigarette industry, other cigarette industries, other tobacco processing industries, and tobacco drying and processing industries.

Considering the variety of businesses in the industry, one its normative foundations for business in the industry include the Minister of Finance Regulation No. 147/PMK.010/2016 about The Third Amendment to the Minister of Finance Regulation No. 179/PMK.011/2012 About Excise Tobacco Tariffs. Based on this regulation, besides raising the cigarette excise tariff by an average of 10.54 percent, it also regulates the retail selling price (HJE) of cigarettes that is valid per January 1, 2017. Based on the regulations that promote tax policy reform to control cigarette consumption in the community, this proposed a revision of Law No. 39/2017 about The Amendments to Law No. 11/1995 about Excise. The revision is also intended to provide a significant fiscal gap. With the significant decrease in companies, cigarette companies are facing business policies that make companies have to experience the price in their sales.

Turning from policies and decreasing number of companies, in terms of productivity, tobacco companies have a significant amount of productivity that contributes to the wheels of the economy in Indonesia. The productivity and contribution are as follow:

Table 2. Company Productivity

No.	Year	Total production (billion stems)	Excise receipt (trillion IDR)
1	2007	231.0	43.5
2	2008	240.0	49,9
3	2009	245.0	55.4
4	2010	249.1	63.3
5	2011	279.4	73.3
6	2012	301.0	90.6

No.	Year	Total production (billion stems)	Excise receipt (trillion IDR)
7	2013	348.0	103.6
8	2014	-	-

Source: Kompasmania, September 2014.

Based on Table 2 above, tobacco companies have been increasing its productivity every year and contributing significantly to state revenues. However, the increase in the number of production from year to year is not stable. In 2007, cigarette production amounted to 231 (billion stems), 240 in 2008, but only 245 in 2009 and 249.1 in 2010. In 2011 – 2013 production began to increase significantly: 279.4 in 2011, 301 in 2012, and 348 in 2013.

However, the contribution to state revenue is increasing significantly of more than five trillion rupiahs every year. In 2007, the contribution to the state revenue amounted to 43.5T, 49.9T in 2008, 55.4T in 2009, 63.6T in 2010, 73.3T in 2011, 90.6T in 2012, and 103.5T in 2013. This contribution is a significant contribution to Indonesia's economy. In line with Rajaratnam's research (2006), the investment plan is expected to be economically viable and financially to be built in the future. In line with Halil's research (2016), which explains what investment projections are feasible to run? Moreover, if it is reviewed through the amount of productivity, it can be pressed for these companies to absorb many workers in Indonesia. Thus, this condition is one of the dilemmatic conditions for the company wherein the cumulative industry the number continues to decline, and policies that continue to suppress the movement of the company are the company.

Furthermore, from the background previously explained, the questions will arise in the future of the company's performance. These questions will lead to the sustainability of the company in the future. For this reason, a comprehensive study is needed in which the company's performance is calculated by a scientifically systematic assessment method to contribute to the investment assessment and the company's financial performance. Thus, the study will be carried out in a scientific manner with the title "Investment Feasibility Study." The study was conducted on the listed cigarette companies on the IDX (Indonesia Stock Exchange).

2. Literature Reviews

Feasibility study

According to Sutrisno (1982), a feasibility study is a study or assessment of whether a project proposal/business idea if implemented can run and develop in accordance with its objectives or not. Objects or subject matters of feasibility studies are project proposals/business ideas. The project proposal/business idea was reviewed, investigated, and investigated from various aspects whether it fulfilled the requirements to develop or not, for example marketing aspects, technical aspects, process aspects including input, output and marketing, commercial aspects, juridical aspects, social-cultural aspects, pedagogical aspects, and economic aspects. Meanwhile, Yacob Ibrahim (1998) stated that the feasibility study is an activity to assess the extent to which benefits can be obtained in carrying out a business activity/project and is a material consideration in making a decision, whether to accept or reject planned business/project ideas.

From both opinions about the definition of feasibility study above it can be concluded that the feasibility study is an act of analyzing, reviewing and investigating various specific aspects of a

business/project idea that will be implemented or implemented, so as to provide a feasible picture (feasible-go) or not feasible (no feasible-no go) a business/project idea seen from the results obtained.

Financial Statement Analysis

Financial statement analysis involves the use of financial statements, especially balance sheets and income statements because financial statements provide information about a company. Performance information is mainly provided in the income statement. Financial statement analysis is the application of analytical tools and techniques for general purpose financial statements and related data to produce useful estimates and conclusions in business analysis (Wild, 2005). Thus, financial statement analysis is a method for assessing a company's performance.

Analysis of stock investment is a fundamental thing for investors to know, seeing without good and rational analysis investors will suffer losses. The decision to buy shares occurs if the estimated value of a stock is above the market price. Conversely, the decision to sell shares occurs when the value estimate of stock below market price. The stock appraisal process needs to be distinguished between values and prices. Value is an intrinsic value, while the price is defined as market price. Intrinsic value is a true value of a stock that is determined by several fundamental factors of the company.

In general, there are many techniques of analysis in assessing the investment (the banner Anoraga and Piji Pakarti, 2003) there are two, namely analysis fundamental, technical analysis, economic analysis, and financial ratio analysis. Fundamental analysis relates to the financial condition of a company. With this analysis, investors were helped to find out how investors owned the company's operations. Technical analysis used in this analysis in the form of a graph, it can be known how the tendency of the market, securities or commodity futures to be chosen in investing. This analysis is usually used for short and long-term analysis. Economic analysis of the indicators used by policymakers in the economic field is the level of GDP (Gross Domestic Product). Whether economic growth is good or not is seen from the welfare of local people and followed by capital market activities. Financial ratio analysis is an analysis that is widely used by potential investors that will reflect the financial situation and be reviewed from the company's operations.

Thus, from the above statement to assess investment in a company can use the analysis of the company's financial statements. In line with Lee's (2017) research, research methods approach to cash flow and BEP. Moreover, Siswati's research (2015), the method focuses on financial aspects. This assessment will use financial ratio analysis techniques that consist of:

1. Return on Investments (ROI)
2. Interest Rate of Return (IRR)
3. Net Present Value (NPV)
4. Break Event Point (BEP)
5. Pay Back Period (PP)
6. Average Rate of Return (ARR)

The calculation will be used to assess the investment each year so that it can answer the research problem, and draw conclusions in the study.

3. Research Methods

This research includes 4 (four) main stages starting from data collection, data analysis, preliminary data processing and concluding the generalization of data in the form of research results and recommendations (suggestions). At each stage of the activity, some activities are the main focus and its output. The stages are explained as follows:

1. Historical Data Collection Stage

In this stage, the research will focus on collecting data related to the research that will be conducted. Furthermore, the data will be analyzed and then forwarded to the next stage for data analysis and processing. The data collection steps that will be carried out are:

a. Literature Study

Literature study is intended to collect data in the form of research literature in the form of magazines, books, articles, and financial reports as well as the research to be conducted. Data collected will be quantitative and represent the final output of the research data.

b. Secondary Data Collection Method

Secondary Data Collection Method is when the data are collected by someone else for a purpose other than the researcher's current project and has already undergone the statistical analysis is called as secondary data. This step will be carried out using media that can support research processes such as the internet, computers, the IDX website, the World of Investment and so on. The data observed will produce a sampling output in the object of research. The sampling technique carried out in this study was *purposive sampling*. The step is intended so that the sample under study meets the requirements in answering the questions in the study. The samples are as follows:

Table 3. List of Listed Cigarettes Manufacturing Companies

No	Company name
1	PT. Bentoel Internasional Investama Tbk
2	PT. Gudang Garam Tbk
3	PT. HM Sampoerna Tbk

Source: IDX Indonesia Stock Exchange 2008-2014

2. Data Analysis and Processing Stage

Analysis Technique	Feasibility Criteria
Return on Investment (ROI)	Investment is said to be feasible when it produces positive ROI
Interest Rate of Return (IRR)	Investment is said to be feasible when $IRR > \text{debt interest}$ and not feasible when $IRR < \text{debt interest}$.
Net Present Value (NPV)	Investment is said to be feasible when it produces positive NPV.
Break Event Point (BEP)	Investment is said to be feasible when $\text{sales} > \text{operating expense}$
Pay Back Periode (PP)	Investment is said to be feasible when PP is less

Analysis Technique	Feasibility Criteria
	than the investment period.
Average Rate of Return (ARR)	Investment is said to be feasible when $ARR >$ working capital.

Source: Researcher Analysis

In this stage, the data that has been collected is formulated in accordance with the research objectives that have been established previously. The purpose of research formulation is to answer the focus of research on data that has been collected previously by researchers. For this reason, all research data will be reduced according to the problem formulation. However, the steps taken in this stage are as follows:

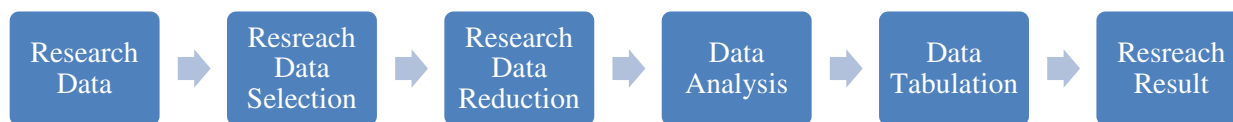


Chart 1. Data analysis

4. Results and Discussions

Return on Investment (ROI)

Table 4. ROI Table

Company name	ROI
PT. Bentoel Internasional Investama Tbk.	-16%
PT. Gudang Garam Tbk.	81%
PT. Sampoerna Tbk.	32%

Source: Output results, data processed

Based on the research of 3 samples of the company studied, the best ROI was produced by PT. Gudang Garam Tbk. That is 81% and for the worst ROI produced by PT. Bentoel Internasional Investama Tbk amounted to -16%. This indicates that PT. Gudang Garam Tbk. is very efficient in utilizing its assets in the company's operational activities in other words the management of PT. Gudang Garam Tbk. is very effective in using company assets to generate income. PT. Bentoel Internasional Investama Tbk. Suffered losses for three consecutive years so that the ROI generated was negative. PT. Gudang Garam Tbk and PT. HM Sampoerna Tbk. for four consecutive years always made a profit that resulted in a positive ROI, but in this case, PT. Gudang Garam Tbk had a higher value than PT. HM Sampoerna Tbk. This shows that the management of PT. Gudang Garam Tbk. is more efficient in using the company's assets to generate revenue for the company. That way of course investors will be more interested in investing in PT. Gudang Garam Tbk because it is considered more efficient in generating revenue. Even though it was seen from the data taken, PT. HM Sampoerna Tbk experienced a very high increase in assets compared to other companies, but still, the management of the company was unable to utilize the assets that existed to optimize profitability. PT BENTOEL INVESTAMA in this case doesn't look better compared to other company samples because during the period of the study the company suffered losses despite the available capital, which means the management of PT BENTOEL INVESTAMA could not utilize the capital provided by the company. This affects the results of ROI and it not feasible.

Although the three companies are equally engaged in the same field but there is a difference that causes the ROIs shows a large "gap". The difference between the three sample companies in this case is due to the ability and strategy of the company's management in generating profits. In addition, the capital provided by PT BENTOEL INVESTAMA during the study period can be said to be very low compared to the other two companies. Capital is one of the important things in running a business, but there the way management manage the capital to generate maximum profits is as important. The data above shows that the management of PT BENTOEL INVESTAMA is not competitive in competing with other cigarette companies. PT GUDANG GARAMA and PT SAMPOERNA have a positive ROI, which means that their management in are better and more competitive in terms of generating profit. In this case, PT GUDANG GARAM produces a very high ROI value with a slightly lower capital than PT SAMPOERNA. This indicates that the management of PT GUDANG GARAM is better than PT SAMPOERNA, although in terms of company resources, PT SAMPOERNA is more superior.

The superiority of PT GUDANG GARAM management is very clear compared to PT SAMPOERNA and PT BENTOEL INVESTAMA. Just imagine with a few assets that can generate high income, especially if the assets owned are large, of course, the income generated will be very - very large. Investors must avoid companies with negative ROI because it proves that the company is not effective in utilizing assets to generate profits. This indicates that the management does not have the ability to utilize available resources optimally. In view of ROI, the higher the ROI, the better the effectiveness so that returns on investment will be higher. In this study, of course, investors must choose an investment in PT. Gudang Garam Tbk when viewed from the perspective of a valuable ROI of 81% even though over the past three years the increase in assets was not too high compared to PT. HM Sampoerna Tbk. This gives signals to investors that the management quality of the three sample companies are different. As long as the management quality of PT BENTOEL INVESTAMA and PT SAMPOERNA are not improving, PT GUDANG GARAM will always excel in the competition of profitability.

Internal Rate of Return (IRR)

Table 5. IRR Table

Company Name	IRR
PT. Bentoel Internasional Investama Tbk.	678%
PT. Gudang Garam Tbk.	218%
PT. HM Sampoerna Tbk.	571%

Source: Output results, data processed

Based on the research of 3 samples of the companies studied, the IRR of each sample company was very high. It can be seen in the table for PT. Bentoel Internasional Investama Tbk., PT. Gudang Garam Tbk and PT. HM Sampoerna Tbk. amounting to 678%, 218% and 571% respectively. This indicates that with a high IRR, the space for expectations for return on investment is wide enough. The IRR is an analytical tool to measure the effectiveness of investment returns compared to investments in other places (bank deposit interest, mutual funds,

and others. This shows that compared to investments in banks or mutual funds, investors should prefer investment in the sample company because the IRR is more profitable.

Even though investments in banks are safe and profitable, when investing in a sample company there is an opportunity that is very wide open to get a return on investment that is intended. The higher the IRR, the higher the chance to get a good return on investment, so investors, if they want to choose, must be an investment wherein the IRR point of view it is better to choose at PT. Bentoel Internasional Investama Tbk. Even though during 2008 – 2014 they always suffered losses. This happens because, with a small investment, this company still gets good cash inflows in the 2013 – 2016 periods. However, PT BENTOEL INVESTAMA has a good cash inflow; therefore the IRR is better than PT GUDANG GARAM and PT BENTOEL INVESTAMA. This happened because PT BENTOEL INVESTAMA during the study period collect more cash compared to other companies. This means, PT BENTOEL INVESTAMA does not require additional cash in conducting its business activities, in contrast to the other two companies that needs to raise more cash to carry out its business activities. With a small cash investment, PT BENTOEL INVESTAMA can still carry out its business activities during the research period. In contrast to PT. Gudang Garam Tbk and PT. HM Sampoerna Tbk., even though in the three years of the study period it always made a profit but cash inflow was not too large compared to PT. Bentoel Internasional Investama Tbk.

Net Present Value (NPV)

Table 6. NPV Table

Company name	NPV
PT. Bentoel Internasional Investama Tbk.	Rp. 47,596
PT. Gudang Garam Tbk.	Rp 184,969
PT. HM Sampoerna Tbk.	Rp. 255,845

Source: Output results, data processed

Based on the research of the three sample companies studied, it can be seen that the highest NPV is PT. HM Sampoerna Tbk and the lowest NPV is PT. Bentoel Internasional Investama Tbk thus indicating that the increase in the value of the PT. HM Sampoerna Tbk, the company is very fast compared to other companies. This is of course greatly influenced by the high profit from PT. HM Sampoerna Tbk compared to other companies over a four-year period. One of the factors that make PT. Bentoel Internasional Investama Tbk.'s NPV smaller than other companies is because this company always loses during 2008-2014 but this does not make the company's NPV negative because there are factors One of the benefits of NPV in the business is measuring the company's ability to manage investment in the next few years when changes in currency values and have a direct impact on the company's cash flow. NPV that is said to be feasible to do is when the NPV value is more than 0 and is said to be inappropriate when the NPV value is below 0. Positive NPV value indicates that investment is feasible because it will benefit investors, but inversely if the NPV value is negative, this must be avoided by investors so as not to lose the investment.

When investors compare several investments using NPV, the first thing to note is whether the value of the NPV is a positive or negative investment, but when all investment options have a

positive NPV value, investors are encouraged to choose the highest NPV value because the higher the NPV worth the investment. Based on the results of this study, the possible investment is the investment in PT. HM Sampoerna Tbk because based on the above, the NPV value in this company is the highest value compared to other companies. If the investor chooses to invest in all three companies, it is still feasible because the NPV value does not have a negative NPV value. This indicates that if investors invest in these three companies, they will benefit from each of these investments.

Break Even Point (BEP)

Based on this study, not all companies experience BEP because of PT. Bentoel Internasional Investama Tbk always loses so that the profits earned are smaller than the operational costs. This is one of the investors' concerns because, with the achievement of BEP, the company can achieve sales targets in terms of maximum profit. In this case, it indicates that the management at PT. Bentoel Internasional Investama Tbk. is unable to realize the company's goal of generating profits. PT BENTOEL INVESTAMA always incurred loss during the study period, meaning the strategy for generating profits is very weak compared to other companies sampled. This indicates that the sales generated by PT BENTOEL INVESTAMA are very low compared to the costs required for production for year to year and the management of PT BENTOEL INVESTAMA seemed to fail to make improvements, so the losses suffered by PT BENTOEL INVESTAMA swelled even more. This certainly will be an investor's attention because companies that do not generate profits will be a consideration of investors in making their investments. If you have to choose, investors are advised to choose to invest PT. Gudang Garam Tbk because this company generates high profits due to low costs. This means that the management of PT. Gudang Garam Tbk. has a very good business strategy in selling its products so that the profit generated can be optimal.

Payback Period (PP)

Based on the results of this study, three sample companies failed in the Payback period because the money invested will not close again for three years so if the investor assesses the investment feasibility through a payback period of three years then the above three companies are not feasible for investment. This is because the initial investment was high in 2012 but during 2008 – 2014 the three companies produced a little cash inflow so that it can be said to fail in the payback period. Payback period shows the ability of a company to cover the amount of investment that has been made in the desired period. In this study, it indicates that all sample companies cannot recoup their investment within three years. PT GUDANG GARAM and PT SAMPOERNA, which are always profitable every year, cannot cover the investments that have been made in three years. This is because investment tends to be large but the profits generated are small. Therefore, it takes more time so that each sample company can be said to succeed in the payback period.

Average Rate of Return (ARR)

Table 7. Table Average Rate of Return

Company name	ARR
PT. Bentoel Internasional Investama Tbk.	-16%
PT. Gudang Garam Tbk.	81%
PT. HM Sampoerna Tbk.	32%

Source: Output results, data processed

Based on the results of this study, according to the ARR point of view, 3 sample companies can be said to be unfit for investment because ARR is worth less than 100%. In the ARR point of view, the investment that is worth doing is $ARR > 100\%$ otherwise if $ARR < 100\%$ then the investment is not screened. According to the table above, the ARR from PT. Bentoel Internasional Investama Tbk. is not screened because it is negative. This is because during the period 2008-2014, PT. Bentoel Internasional Investama Tbk always suffered losses; of course, this will be very bad in the eyes of investors where successive losses will reduce the value of the company in the eyes of investors. PT. Gudang Garam Tbk. is also not feasible for investment because it only produces 81% for ARR.

The profit generated in the 2008-2014 period is not too large; of course, this is the concern of investors who plan to invest their money in the company. If investors are faced with the investment options above, then obviously investors should invest in PT. Gudang Garam Tbk because even though the ARR is below 100%, the ARR value generated is quite high compared to other companies and as much as possible avoided investing in PT. Bentoel Internasional Investama Tbk because they always suffer losses. As discussed earlier, in terms of management during the study period, PT BENTOEL INVESTAMA failed to meet its expectations of generating profits due to weak and uncompetitive management strategies compared to other sample companies. Investors may not include PT BENTOEL INVESTAMA in their investment portfolio if this continues. PT BENTOEL INVESTAMA must make improvement in the management to stop the repeating loss.

5. Conclusion and Suggestion

Conclusion

Based on the portfolio of the two sample companies below, it is very clear that PT. Bentoel Internasional Investama Tbk. is not as feasible as the other two companies this company is said to be feasible for investment seen only from NPV and IRR point of view, unlike the other two companies, PT. Gudang Garam Tbk and PT. HM Sampoerna Tbk that is feasible from the point of view of ROI, NPV, IRR, and BEP. However, if investors who see from the perspective of ARR and BEP, it means that all of the above companies are not feasible for investment because they do not meet the criteria.

Table 8. Portfolio Table

Company Name	ROI	IRR	NPV	BEP	PP	ARR
PT. Bentoel Internasional Investama Tbk.	Not feasible	Feasible	Feasible	Not feasible	Not feasible	Not feasible
PT. Gudang Garam Tbk.	Feasible	Feasible	Feasible	Feasible	Not	Not

Company Name	ROI	IRR	NPV	BEP	PP	ARR
					feasible	feasible
PT. HM Sampoerna Tbk.	Feasible	Feasible	Feasible	Feasible	Not feasible	Not feasible

Source: Output results, data processed

If we look at it from the perspective of NPV and IRR, all of the above companies are feasible because they meet the requirements criteria of each point of view. Overall, PT. Gudang Garam Tbk. is the most feasible of all three, followed by PT. HM Sampoerna Tbk.

Suggestion

Investors who are faced with investment decisions in the three companies above are expected to be able to choose the right one and in accordance with the strategy and objectives to be achieved. If the goal is payback period and ARR, it is advisable not to invest in the three companies above, but if you look at it from the perspective of ROI, NPV, IRR, and BEP, it is advisable to invest in PT. Gudang Garam Tbk and PT. HM Sampoerna Tbk. Investors are advised to ignore investments in PT. Bantoel Internasional Investama Tbk because according to the descriptions above it is detrimental even though for some points of view it can still be said to be feasible but should be avoided.

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