

# EFFICIENCY ANALYSIS OF SHARIA VENTURA CAPITAL COMPANIES USING DATA ENVELOPMENT ANALYSIS (DEA) PERIOD 2014 – 2018

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## Abstract

Efficiency is one of the performance parameters that theoretically underlies the entire performance of a venture capital company. A lot of research on the efficiency of venture capital companies mostly focuses on conventional venture capital companies. Recently, Islamic venture capital companies have developed in various regions in Indonesia and are operated in a modern and sharia manner like other Islamic venture capital companies. This study evaluates the efficiency performance of Islamic venture capital companies in the period 2014 - 2018 (this study uses annual data) using Data Envelopment Analysis (DEA), where the first step is to measure the technical efficiency performance of venture capital companies using Data Envelopment Analysis (DEA) with using an intermediation approach. Based on the efficiency measurement using the DEA method, it shows that the Sharia Venture Capital Company during the 2014 - 2018 period was still inefficient. The efficiency value of the most efficient venture capital company is 100%. The data used in this study is secondary data, collected from financial reports published by the Indonesian Financial Services Authority (OJK) and the websites of each company. The sampling technique used in this study was purposive sampling by taking a sample of 5 (five) Islamic venture capital companies. The input variables used in this study are total assets, capital and labor costs. While the output variable includes financing and revenue sharing.

**Keywords :** *Data Envelopment Analysis, Sharia  
Venture, Capital Companies*

**JEL Classification :** G24, O16

## INTRODUCTION

There are so many financial institutions that provide financing, either in the form of equity participation or in the form of loans. For financial institutions that provide financing in the form of loans, such as financial

institutions, Islamic banks require borrowers to provide collateral and require prospective financing customers to attach financial statements of businesses that have been run. Problems arise when a company that is just starting its business wants to apply for a loan to a Sharia Bank, where the new company does not have any financial statements at all and may not even have the collateral required by the Sharia Bank. Financing is one of the important things for companies that are just starting a business, but it is difficult to obtain. For companies that have just opened a business and are having difficulties in getting funding but still want to be on sharia signs, then the right solution is Sharia Venture Capital. The presence of sharia venture capital not only accommodates the interests of Muslims, but also prioritizes the advantages and benefits by providing financing assistance to small, medium and large economic activities as well as with sharia-compliant principles.

The venture capital is capital invested in a Business Partner Company which has difficulty in developing its business funds, where this business contains risks and the venture capitalist expects a profit from it. Meanwhile, sharia venture capital is a financing business in the form of equity participation in companies that receive financing assistance for a certain period of time based on sharia principles. The practice of venture capital that is carried out based on sharia contracts and moves that do not conflict with recognized sharia principles. Financing assistance for a certain period of time based on sharia principles. The practice of venture capital that is carried out based on sharia contracts and moves that do not conflict with recognized sharia principles.

The difference between a bank and venture capital lies in the type of activity. The bank finances an activity, but does not enter the company it finances, while venture capital provides financing by means of direct investment in the company.

Table 1. Difference between Bank and Venture Capital

No		Bank	Venture Capital
1	Perpetrator	Banks, creditors, debtors	Investors, venture capital firms, Business Partner Company
2	Financial assistance	Loan/credit	Equity capital
3	Management involvement	There is not any	Exist as a partner
4	Type of risk	Bad credit	Failed attempt
5	Profit form	Credit interest	Capital gain
6	Term	Short, medium, long.	5-10 years (long term)
7	End of contract	Pay off & break up	Divestment

The regulation of venture capital activities is further regulated by the Decree of the Minister of Finance Number 469/KMK.17/1995 dated 3 October 1995. Venture capital activities were pioneered by PT Bahana Pembinaan Usaha Indonesia (BPUI) since 1973. PT BPUI was established based on Government Regulation Number 18 of 1973 concerning State Equity Participation to establish a Limited Liability Company whose business is engaged in equity participation. The regulation of venture capital is further regulated by Decree of the Minister of Finance Number 469/KMK.17/1995 dated October 3, 1995 concerning the Establishment and Granting of Venture Capital.

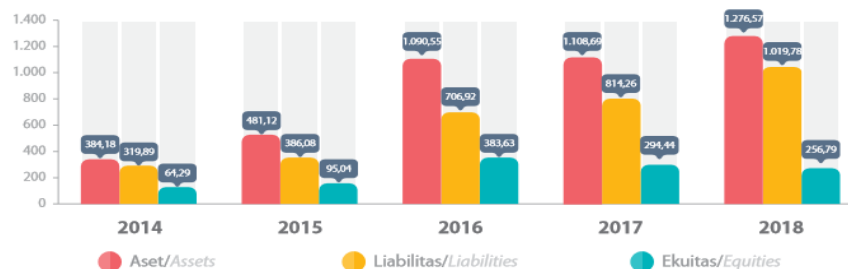
The venture capital industry showed positive performance in the first semester of 2019. A number of financial indicators showed improvement. Such as the value of equity participation

and the ratio of non-performing financing (NPF) which is improving. The Financial Services Authority (OJK) noted that until the first semester of 2019, the venture capital industry recorded financing and investment of Rp 10.1 trillion. This value increased by 23.9% from the first semester of 2018 which reached Rp 8.15 trillion. Secretary General of the Indonesian Venture Capital and Startup Association (Amvesindo) Rimawan Yasin said this positive trend was driven by business improvements for business actors who became venture capital partners. This is because the sluggish performance of business partner companies will also affect the performance of venture capital. The financing industry sector increased by 47% followed by the trade sector by 32%, this shows that the business world has begun to squirm for better growth. The venture capital industry has also succeeded in reducing the NPF by 1%, which is a remarkable achievement. From the value of financing and venture capital participation in the first semester of 2019, the profit-sharing financing segment is still the largest. Financing was recorded at Rp 8.23 trillion or grew 29.4% from the same period last year. Meanwhile, the investment in shares is Rp. 1.4 trillion. Then convertible bonds reached Rp 496 billion, an increase of 1.43 percent from the same period last year of Rp 489 billion. So far, venture capital has mostly included shares of small and medium businesses or start-ups. Another factor that affects the growth of financing and investment is the increasing number of players in this business. As of the first semester of 2019, there were 66 venture capital business actors. This number increased by five companies from the same period from 2017. Not only recorded growth in financing. Indonesia Financial Service Authority (OJK) noted that the NPF ratio of the venture capital industry has also improved. In the first semester of 2019, the NPF ratio was recorded at 4.02%, improving compared to the same period last year which reached 5.02%. (www.kontan.co.id , 2019).

As of the end of 2018, there are eight venture capital companies that carry out business activities based on sharia principles, consisting of four companies in the pure form of sharia and four sharia business units (Financial Institution Statistics Book, 2018).

In accordance with Figure 1.1, the total assets of Venture Capital Companies based on sharia principles are IDR 1,276.57 billion. In addition, the liabilities and equity of venture capital companies based on sharia principles reached Rp 1,019.78 billion and Rp 256.79 billion, respectively.

Picture 1. Assets, Liabilities, and Equity of Sharia Venture Capital Companies 2014 – 2018



source: Otoritas Jasa Keuangan (OJK) Buku Statistik Lembaga Pembiayaan 2018

Efficiency is the best comparison between inputs (inputs) and outputs (results between profits and the resources used), as well as the optimal results achieved with the use of limited resources. In other words, the relationship between what has been completed (Hasibuan, 1984) quoting H. Emerson's statement). The ability to produce maximum output with existing inputs

is a measure of the expected performance. When measuring efficiency is carried out, financial institutions are faced with the condition of how to increase the optimal level of output with the existing level of input or by obtaining a minimum level of input with a certain level of output. By analyzing the allocation of inputs and outputs, it can be further analyzed to see inefficiencies. The input variables that will be used are TPF/savings, total assets and labor costs, while the output variables used are financing and revenue sharing.

The results of Nababan and Sari's research (2010) measure the efficiency of venture capital credit for capture fishermen. This study aims to determine the relative efficiency of providing venture capital credit to fishermen in Tegal Regency who catch fish using cantrang fishing gear. The data used consists of primary and secondary data. Data Envelopment Analysis (DEA) is used to determine the relative efficiency of fishermen who receive venture credit compared to non-recipient fishermen. The analysis was also developed using 2 scenarios, namely output maximization and cost minimization. The results showed that by using all input and output variables, 6 out of 7 fishermen who received venture credit were 100% efficient and only 2 respondent fishermen did not receive venture credit which had 100% efficiency. Based on scenarios 1 and 2, only 2 fishermen receiving venture credit experienced 100% efficiency; while others ranged from 70% - 100%. Fishermen who do not receive venture credit have an efficiency of < 70%. The provision of venture capital credit can increase the efficiency of the capture fisheries business, especially for fishermen who fish far from the coast.

Furthermore, Manaf et al (2009) research on the performance and role of venture capital on capture fisheries in the city of Tegal, Central Java. So far, venture capital has not been widely known in the marine and fisheries sector, while this sector has problems in terms of capital. This capital challenge has become a classic problem in the fisheries sector so that it requires a comprehensive solution by all parties. The existence of venture capital on the one hand actually provides a large enough opportunity to bridge and help solve these problems. But on the other hand, until now there is no appropriate model for the use of venture capital in fisheries. The purpose of this study was to examine the effect of venture capital on capture fisheries performance in Tegal City, Central Java. This research was conducted in Tegal City because this area has many fishermen who receive venture capital assistance from PT Sarana Jateng Ventura. The analysis used in this research is descriptive analysis, regression analysis and DEA analysis (Data Envelopment Analysis). The results obtained from this study include venture capital having a very positive or very significant effect on capture fisheries in Tegal City, if it is carried out in accordance with the initial characteristics of venture capital itself and the need for criteria for granting venture credit, such as ship age, fisherman experience and the amount of credit. venture capital provided.

With these problems, it is urgently needed a research on the efficiency of Syari'ah Venture Capital Companies. This is done so that the operating Syaria'ah Venture Capital Companies can have a high efficiency value, so that their operations are balanced. Because it is possible that a Sharia Venture Capital Company that is considered good by the public turns out to have a low efficiency value compared to other Venture Capital Companies and vice versa. This is what underlies this research, and the results of this research can be used as a reference for each Syari'ah Venture Capital Company to be more efficient in its operations in addition to its various sharia products.

With this in mind, the researcher will conduct a study on the efficiency of the Syari'ah Venture Capital Company. The method used is the DEA method, where this method can

calculate how much the efficiency value of each Syari'ah Venture Capital Company is. Based on the description above, the authors are interested in conducting research on Sharia Venture Capital Companies to measure the efficiency level of Sharia Venture Capital Companies by using Data Envelopment Analysis (DEA). Therefore, the author examines efficiency with the title "Efficiency Analysis of Islamic Venture Capital Companies Using Data Envelopment Analysis (DEA)".

From the background that has been stated, several problems can be formulated as Have the operational activities of each Sharia Venture Capital Company reached an efficient operational level and What is the value of efficiency in operational activities in each Sharia Venture Capital Companies. The aims of this research are Analyzing the efficiency of Sharia Venture Capital Companies, Shows the target of input and output efficiency in each PMVS, Provide guidance on which PMVS can be used as a reference for improvements for offices that are efficient in their operational activities. The benefits of this research are obtaining efficiency values, so that it is useful for management in improving operational performance in each of the PMVS studied, provide a reference for academics so that it can be used as further research on Sharia Venture Capital Companies, and used as a reference for improvement so as to make PMVS more professional in its operational activities.

## **LITERATURE REVIEW**

### **Sharia Venture Capital Company (PMVS)**

The development of venture capital in Indonesia began in 1973 with the establishment of PT. Bahana Pembinaan Usaha Indonesia (BPUI), which at that time had an institutional status, was included in a Non-Bank Financial Institution whose activities were mainly to finance business development. PT. This BPUI was formed based on Government Regulation no. 18 of 1973 is engaged in equity participation (Soemitra, 2010).

Meanwhile, sharia venture capital has recently been present in very small numbers. Principally, Shari'ah venture capital is based on the existing legal basis of venture capital. However, Shari'ah venture capital is enriched with Shari'ah-appropriate principles.

Furthermore, the development of venture capital in terms of its legal basis in Indonesia can be ordered chronologically as follows (Siamat, 2004).

1. Presidential Decree No. 61 of 1988 concerning Financing Institutions. Venture capital business is legally part of the activities that can be carried out by financial institutions.
2. Provisions for the implementation of the first point are regulated based on the Decree of the Minister of Finance No. 1251/KMK.013/1988 dated December 20, 1988 concerning Provisions and Procedures for the Implementation of Financial Institutions. And perfected the Decree of the Minister of Finance No. 1251/KMK.013.1989 dated November 18, 1989.
3. Government Regulation No. 62 of 1992 concerning the Business Sectors of Business Partner Companies (PPU) of Venture Capital Companies, which was followed up by the Decree of the Minister of Finance No. 227/KMK.01/1994 dated June 9, 1994 concerning the Business Sectors of Business Partner Companies of Venture Capital Companies.
4. Government Regulation no. 4 of 1995 concerning Income Tax for Venture Capital Companies.

5. Decree of the Minister of Finance No. 469/KMK.17/1995 dated October 3, 1995 concerning the Establishment and Development of Venture Capital Companies.
6. Law No. 7 of 1991 concerning Income Tax.
7. Government Regulation no. 4 of 1995 concerning Income Tax for Venture Capital Companies.

Based on the Decree of the Minister of Finance No. 469/KMK.17/1995 dated October 3, 1995 concerning the Establishment and Development of Venture Capital Companies, venture capital is no longer part of financing activities. And since then, venture capital is carried out separately from the legal entity itself. This has resulted in venture capital developing in the regions. The objectives of developing venture capital in the provinces are as follows (Soemitra, 2010)

1. To provide financing facilities in order to help SMEs that are difficult to meet bank credit.
2. Establishment of a Regional Venture Capital Company (PMVD) makes it easier supervision and development of Business Partner Companies (PPU).

This objective is based on PP No. 4 of 1995 above, that the income of a Venture Capital Company which is part of the profits received from equity participation in PPU within a period of 10 years, is not an object of income tax.

Theoretically, venture capital has great potential to contribute to business development. Companies that have good prospects but do not have enough capital and do not have access to banking can grow by obtaining capital support from venture capital.

During the OJK era, 4 new OJK regulations related to venture capital companies have also been issued, namely:

1. POJK Number 34/POJK.05/2015 concerning Business Licensing and Institutional Venture Capital Companies.
2. POJK Number 35/POJK.05/2015 concerning Business Operation of Venture Capital Companies.
3. POJK Number 36/POJK.05/2015 concerning Good Corporate Governance for Venture Capital Companies.
4. POJK Number 37/POJK.05/2015 concerning Direct Examination of Venture Capital Companies.

OJK encourages venture capital companies to develop creative industries, such as online-based creative industries that have great potential for growth. Venture capital firms can also help underdeveloped and needy companies to take over and promote priority economic sectors such as renewable energy, industrial downstreaming and tourism. In addition, OJK also encourages venture capital companies to develop fee-based income. This is done by providing consulting services in the field of administration. It is also a distributor of products and required investment.

Theoretically, venture capital has great potential to contribute to business development. Small companies that have good prospects but do not have enough capital and do not have access to banking can develop by obtaining capital support from venture capital. New



innovations in various fields of technology can be more easily implemented if they have the support of venture capital as experienced in various countries.

### **Efficiency Theory**

According to Hidayat (2001) efficiency is a ratio or ratio between input and output. The company can be said to be efficient if it is able to produce more output than the input issued or produce the same output but the input issued is little. Meanwhile, according to Draft (2007) in Rosyadi and Fauzan (2011) efficiency is an act of maximizing results by using minimal capital (labor, materials, and tools). Another opinion suggests that efficiency is the ratio or comparison of successful effort or work, and all the work or sacrifices that are mobilized to achieve certain results in other words, the ratio between inputs and outputs.

1. Wheelock and Wilson (1995) stated that efficiency is an important measure of bank operational conditions and is one of the key indicators of individual bank performance achievement, after being compared with the performance of the banking industry as a whole. Efficiency studies are also important to measure the potential impact of government policies on regulatory changes by measuring their effects on banking efficiency (Kristanto, 2008).

Iskandar (2012) states that there are three factors that cause efficiency: first, if the same input can produce a larger output. Second, a smaller input can produce the same output, and third, a larger input can produce an even larger output. While the opinion of Tobin (1998) in Sutawijaya and Lestari (2009) there are four factors that influence the efficiency of the company, first, efficiency due to economic arbitrage, secondly efficiency due to the accuracy of the basic valuation of its assets, third, efficiency because bank financial institutions are able to anticipate risks that arise. and fourth is the functional efficiency related to the payment mechanism carried out by a financial institution (Naufal and Firdaus, 2017).

In a company, efficiency is a very important thing for management to get maximum profit. According to Coelli (1996:3) modern efficiency measurement was started by Farrell (1957) who drew on the work concept of Debrew (1951) and Koopmans (1951) to explain a simple measure of company efficiency that can calculate many inputs. Farrell proposed that the efficiency of the company consists of two components: 1) technical efficiency which describes the company's ability to obtain maximum output from a set of inputs, 2) allocative efficiency which describes the company's ability to use inputs in the maximum proportion, at their respective prices. The two measures when combined will be a measure of economic efficiency.

Efficiency is an advantage for an organization or company because with good efficiency capabilities it can compete with others. Consumers prefer cheaper products with the same quality so that companies can make strategies to streamline production costs.

### **Data Envelopment Analysis (DEA)**

DEA was first developed by Farrell (1957) which measures the technical efficiency of one input and one output into multiple inputs and multi outputs, using a framework of relative efficiency values as the ratio of input to output (Giuffrida and Gravelle, 2001; Lewis et al. 1999; Post and Spronk, 1999 in Sutawijaya and Lestari, 2009). This analytical tool was popularized by several other researchers, including (Sutawijaya and Lesati, 2009):

- a) Charnes-Cooper-Rhodes (1978)

These researchers first discovered the DEA CCR (Charnes-Cooper-Rhodes) model in 1978. This model assumes that the ratio between the increase in input and output is the same (constant return to scale). That is, if there is an additional input of  $x$  times, then the output will increase by  $x$  times as well. Another assumption that can be used in this model is that each company or Decision Making Unit (DMU) operates at an optimal scale.

b) Banker, Charnes dan Cooper (1984)

Some of these researchers further developed the BCC DEA model (Banker, Charnes and Cooper) in 1984. This model assumes that the company does not or has not operated at an optimal scale. The assumption of this model is that the ratio between the addition of inputs and outputs is not the same (variable return to scale). That is, increasing the input by  $x$  times will not cause the output to increase by  $x$  times, it can be smaller or larger than  $x$  times. Increasing the proportion can be increasing returns to scale (IRS) or it can be decreasing returns to scale (DRS).

According to Kurnia (2004), DEA is one of the non-parametric analytical tools used to measure relative efficiency, both between profit-oriented business organizations and between non-profit oriented organizations or economic activity actors. In the production process or its activities involve the use of certain inputs to produce certain outputs. This analytical tool can also measure the efficiency of the base and a tool for policy makers in increasing efficiency. Sutawijaya and Lestari (2009) added that DEA can be used in various fields, including: health (health care), education (education), transportation (transportation), factories (manufacturing), and banking.

DEA focuses more on its objective, namely evaluating the performance of an Economic Work Unit (UKE). A UKE is said to be relatively efficient if its dual value is equal to 1 (100 percent efficient value), otherwise if the dual value is less than 1 then the UKE is considered relatively inefficient (Silkman, 1986; Nugroho, 1995 in Huri and Susilowati, 2004). The analysis based on the evaluation of the efficiency will form a faris frontier. If the UKE is in the frontier line, the UKE can be said to be relatively efficient compared to other UKEs in the sample. DEA can also show UKE – UKE which is a reference for inefficient UKE – UKE (Ascarya and Guruh, 2008).

There are three benefits derived from measuring the efficiency of DEA, namely (Sutawijaya and Lestari, 2009)::

- a) As a benchmark to obtain relative efficiency that is useful for facilitating comparisons between the same economic unit.
- b) Measuring the various efficiency variations between economic units to identify the contributing factors.
- c) Determine policy implications, so as to increase the value of efficiency.

Initially, DEA was used to overcome the shortcomings of ratio analysis and multiple regression. Ratio analysis is only able to provide information that certain UKEs have special abilities to convert one type of input to one particular type of output, while multiple regression analysis combines many outputs into one. DEA is designed to measure the relative efficiency of an Economic Activity Unit (UKE) that uses more than one input and output, where the combination is not possible (Sutawijaya and Lestari, 2009). The weaknesses and strengths of DEA include (Purwantoro 2003 in Huri and Susilowati, 2004):



- a) DEA's advantages include:
  1. Can handle multiple inputs and outputs.
  2. There is no need to assume a functional relationship between input and output variables.
  3. UKE is compared directly with each other.
  4. *Input* and the output can have different units of measurement.
- b) Weaknesses of DEA, namely:
  1. It is sample specific (DEA assumes that each input or output is identical to another unit of the same type).
  2. It is an extreme point technique.
  3. Measurement errors can be fatal.
  4. Only to measure the relative productivity of UKE, not absolute productivity.
  5. It is difficult to test the statistical hypothesis of the DEA results.

## RESEARCH METHODS

### Types of research

This study uses a quantitative method based on an event that actually happened. This method is used to examine a particular population or sample. In this study, quantitative methods are used to calculate the level of efficiency of Islamic venture capital companies.

### Data Types and Sources

This study uses secondary data from the Financial Reports of each Sharia Venture Capital Company in 2014 – 2018 which was obtained from company data and statistics from the website of the Financial Services Authority (OJK) and each company.

### Research Population

The population in this study is a Sharia Venture Capital Company, totaling 4 Sharia Venture Capital Companies and 4 Sharia Business Units (UUS).

### Sampling and Sampling Techniques

The sample used was taken from the population of Sharia Venture Capital Companies during the period 2014 – 2018. The sampling in this study was carried out by purposive sampling, namely the sample selection method was selected based on certain criteria.

### Data collection technique

The data collection technique used by the author is a literature study method, namely data collection through the study of literature books, scientific journals and the official website of Islamic financial review institutions to obtain an accurate theoretical basis and obtain financial reports prepared by the related Sharia Venture Capital Company.

### Variable Operational Definition

In this study, using Data Envelopment Analysis (DEA) to measure the level of efficiency by using an intermediation approach consisting of input and output variables. The variables in this study are as follows:

NO	VARIABLE	DEFINITION	INDICATOR
1.	<i>Input</i> : CAPITAL	Assets in the form of money or other forms	CAPITAL = assets – debt

		that are not money that are not owned by investors that have economic value. (article 1 paragraph 7)	
	TOTAL ASSET	Those assets are all rights that can be used in the company's operations. (id.wikipedia.org)	TOTAL ASSETS = liabilities + capital
	LABOR COSTS	Costs incurred as a result of using labor in production (www.dictio.id)	
2.	<i>Outputs:</i>		
	FINANCING	Provision of money or equivalent claims, based on an agreement or agreement between a bank or company and another party that requires the financed party to return the money or claim after a certain period of time with compensation or profit sharing. (Kashmir (2008:98))	
	INCOME FOR RESULTS	Profit sharing is a form of alternative financing scheme that has very different characteristics than interest. (id.wikipedia.org)	$\text{Profit sharing} = x \text{ ratio} \times \frac{\text{average balance} \quad \text{company income in month A}}{\text{average DPKA balance} \quad \text{number of days in month A}}$

## RESEARCH RESULT

This study uses secondary data in the form of financial statements of Sharia Venture Capital Companies with a total of 5 companies. This research data was obtained from the website of the Financial Services Authority (OJK) and each company. The population used is 4 Sharia Venture Capital Companies and 4 Sharia Business Units (UUS).

The technique used for sampling in this study uses a purposive sampling technique, namely a sampling technique with certain predetermined criteria. Based on the above criteria, a sample of 5 companies was obtained according to the purposive sampling technique, consisting of 2 Sharia Venture Capital Companies and 3 Sharia Business Units (UUS).

The efficiency value in this study was obtained from the results of the calculation process using Banxia Frontier Analysis software. This software will give a score of 0-1 then converted in the form of a percentage of 0-100% for each DMU in the object of research. DMU is said to be efficient if it has an efficiency score of 1 or 100%. Meanwhile, DMU that has an efficiency score of less than 1 or 100% is declared inefficient. The efficiency score is a comparison between the input and output of each DMU.

In addition to showing the efficiency score, the Banxia Frontier Analysis software will also show the target value. The target value is the value suggested by the DEA calculation so that the company becomes more efficient.

Based on the results of the calculation of the DEA method, it can be seen that the efficiency level of the Sharia Venture Capital Company is as follows:

COMPANY NAME	EFFICIENCY (percent)				
	2014	2015	2016	2017	2018
Sharia Venture PNM	100	100	100	94.8	94.1
Sharia Venture Persada	100	100	98.1	95.5	100
Sinarماس Bank	100	100	100	100	100
Maybank Bank	100	67.2	89.2	100	100
Bank Danamon	52.7	96.9	100	100	29.2

The results of this study explain that the number of inputs and outputs of Sharia Venture Capital Companies has increased and decreased from year to year, while the average PMVS efficiency fluctuated during the observation period. In addition to companies that have experienced efficiency, there are also companies that have experienced inefficiency. Inefficiency itself is a condition where the company does not operate optimally in terms of the use of funds.

Of the 5 Sharia Venture Capital Companies, which consist of 2 Sharia Venture Capital Companies and 3 Sharia Business Units (UUS), there is only 1 company experiencing efficiency, while 4 companies experiencing inefficiency, which include: National Islamic Venture Capital Company, Sharia Venture Persada, Bank Maybank and Bank Danamon.

In the DEA measurement, a company is said to be efficient if it shows a score of 1, while for an inefficient company the score does not reach 1. The inefficiency is due to the lack of maximum input and output targets. Inefficiency occurs in input variables (total assets, capital and labor costs) and output variables (financing and revenue sharing).

## CONCLUSION

Based on the analysis that has been done in the previous chapter, the conclusions that can be drawn are:

1. Of the 5 Sharia Venture Capital Companies that became the research sample, there was only 1 company that achieved a 100% efficiency level during 2014 – 2018.
2. The 4 companies' inefficiencies occur in all input variables (total assets, capital and labor costs), and output variables (financing and revenue sharing). Input inefficiency is experienced by almost every PMVS. This indicates the use of excessive input and not on target. On the output side, only a few PMVS experienced total financing. This indicates that the output produced is still not optimal and reaches the specified target. Inefficient PMVS is expected to refer to more efficient PMVS by using input-output weights according to the measurement results of the DEA method. This means that an

inefficient PMVS imitates the level of input and output of an efficient PMVS in order to increase the technical efficiency of 100%.

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