

# Sensitivity Analysis of the Demand for Financing in Riau Province

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## Abstract

This research aimed to analyze sensitivity of the demand for financing in Riau Province, with the focuses on the elasticity of the demand for financing, cross elasticity, and income elasticity. The data of this research were quantitative secondary and time series obtained from the publications of the Central Bureau of Statistics (BPS), Bank Indonesia (BI), and the Financial Services Authority (OJK). The data analysis was done by first estimating the non-linear financing demand equation transformed through multiple linear regression equation using Eviews application. The results were in the form of elasticity as a measure of sensitivity. The research variables consisted of profit sharing, conventional bank's interest rate, and gross regional domestic products (GRDP) as independent variables and the demand for financing as a dependent variable. The results of the research showed that profit sharing, conventional bank's interest rate, and GRDP simultaneously influenced the demand for financing in Riau Province with a significant level of 5% and the probability of F value of  $(0.000) < \alpha (0.05)$ . Partially, profit sharing, conventional bank's interest rate, and GRDP had significant influence on the demand for financing. The ability of these independent variables to explain the dependent variable was 99.36 % while the remaining 0.6 % was influenced by other factors outside of this research. The sensitivity value of the demand for financing in sharia banking during the observation period was 1.40 ( $\epsilon_p > 1$ ), meaning that the demand for financing in Riau Province was elastic. Besides, the cross elasticity value of the demand for financing was 0.42 or positive ( $\epsilon_c > 0$ ), and this was categorized that conventional bank's interest rate as a substitution of profit sharing. In addition, the income elasticity value of the demand for financing in Riau Province during the observation period was 1.31 ( $\epsilon_i > 1$ ), and it was categorized as luxurious goods.

**Keywords:** Sensitivity, Financing, Profit Sharing, Interest Rate, and Gross Regional Domestic Products (GRDP)

## 1. Introduction

Economic development of a country is in need of productive natural resources, human resources, and capital resources. Capital is one of the essential factors of production for every business, both in small and large scales. The availability of sufficient capital can support the pace of domestic investments. In addition, capital is also a major factor and has a very high position, especially in business development. With the availability of capital, it can expedite business activities of the community.

Weak capital is one of the constraints of society in producing goods and services. Weak capital of community can be seen from the low income received by them. They need large capital to meet their needs related to the activities of producing goods and services. Their needs may be hampered because the relatively high prices of goods and services which are not in line with limited community income. Therefore, the community requires capital loans from financial institutions that provide capital to meet their needs.

Banking as a financial institution acts as a source of provision of funds to finance all the needs by the community. Banks function as intermediation between parties who need capital (users of funds) and those who have capital (fund owners), especially for development activities and expanding business ventures. Therefore, the presence of banking is very necessary in order to provide loans in the form of credit/financing to people who experience lack of funds. The provision of loans from banks to parties that need capital in the form of financing is carried out by sharia banks.

The presence of sharia banking in Riau Province has benefited various parties, especially for the business field. This is in line with the great deal number of Moslem population in that province as the top position in the national level.

The development of Moslem population in Riau Province in recent years can be seen as follows:

**Table 1. The Development of Moslem Population in Riau Province from 2012-2017**

No.	Year	Population (Number of People)	Growth (%)
1.	2012	5,086,455	-
2.	2013	5,235,931	2.94
3.	2014	5,415,523	3.43
4.	2015	5,652,344	4.37
5.	2016	5,903,873	4.45
6.	2017	6,159,510	4,33

Source: the Central Bureau of Statistics of Riau Province, 2018

Based on Table 1, the development of Moslem population of Riau Province from 2012-2017 continued to increase with a positive trend. This increased number of the population is certainly in line with the increasing demand for financing in sharia banking.

The development of Moslem population is interrelated to the increase in the demand for financing. For instance, when producers must pay input capital they use, especially when they do not use their own capital, they will seek financing from other parties such as from sharia banking. In using the capital from other parties, the producers must compensate to the capital owners. In conventional economics, this compensation is mainly in the form of interests or known as a price of capital. In sharia economics, however, the existence of interest cannot be maintained because of the prohibition of Allah *Subhanahu Wa Ta`ala* regarding this matter. Interest is usury, and it is considered haram (Andriani, 2014). Allah has expressly forbid usury as stated in the Qur'an Surah Al Baqarah verse 278-279.

يَا أَيُّهَا الَّذِينَ آمَنُوا اتَّقُوا اللَّهَ وَذَرُوا مَا بَقِيَ مِنَ الرِّبَا إِن كُنْتُمْ مُؤْمِنِينَ (٢٧٨) فَإِن لَّمْ تَفْعَلُوا فَأْذَنُوا بِحَرْبٍ مِنَ اللَّهِ وَرَسُولِهِ وَإِن تُبْتِغُوا فَكَلِمَةٌ رُّغُوسٍ أَمْوَالِكُمْ لَا تَظْلِمُونَ وَلَا تُظْلَمُونَ (٢٧٩)

Meaning: "O you who believe! Have Taqwa of Allah and give up what remains from Riba, if you are (really) believers. And if you do not do it, then take a notice of war from Allah and His Messenger but if you repent, you shall have your capital sums. Deal not unjustly, and you shall not be dealt with unjustly." (Surah al-Baqarah: 278-279)

From the beginning of the establishment of sharia banks until now, there have been many various kinds of products offered. Broadly speaking, sharia banking products can be divided into five: products with deposits, products with profit sharing, products with the principle of buying and selling, products with principle of leasing, and products with principle or services. Deposit products are called *wadi'ah*. Besides, profit sharing products consist of *musharaka*, *mudharabah*, *muzara'ah* and *musaqah*. Buying and selling products consist of *murabah*, *salam* and *istishna*. Leasing products consist of *ijarah* and *ijarah muntia bit-tamlik* while service products consist of *wakalah*, *kafalah*, *hawalah*, *rahn* and *qard*. (Antonio, 2001: 83-134)

Based on Indonesian sharia banking statistics, there are developments in financing channeled by sharia banking from 2012 to 2017. As seen in the total financial products, it shows that the financing that had been channeled in Riau Province increased rapidly every year. This can be seen in Table 2.

**Table 2. Financing Development in Riau Province in 2012-2017 Period (Billion Rupiah)**

No.	Year	Financing	Growth (%)
1.	2012	3,002	-
2.	2013	3,409	13,56
3.	2014	3,436	0.79
4.	2015	3,747	9.05
5.	2016	4,516	20.52
6.	2017	5,358	18,64

Source: Sharia Banking Statistics, 2018

In Table 2, it is found that the demand for financing from 2012 to 2017 increased significantly. The most striking increase occurred from 2015 to 2016 with a growth of 20.52%, namely from 3,747 billion rupiahs in 2015 to 4,516 billion rupiah in 2016. Furthermore, until 2017 the financing demand continued to increase.

Theory of demand states that demand for an item and service is influenced by price and non-price factors. In relation to demand for financing, the price factor of the financing is profit sharing. The law of demand that says demand will increase if the price decreases, and vice versa. Thus, in the law of demand, quantity of goods requested will be inversely proportional to the price level. In connection with this, demand for financing will increase if the financing price falls, and vice versa.

In the distribution of financing to the public/customers, sharia bank provide profit sharing compensation as borrowing costs in accordance with the profit sharing ratio set by sharia banks. According to Rofiq (2004: 153), profit sharing is a system that includes the procedure for distributing business results between fund providers and fund managers.

Profit sharing that occurs in Sharia banking in the last five years can be seen in Table 3 as follows:

**Table 3. Profit Sharing Rates of Sharia Banks in 2012-2017 Period**

No.	Year	Profit Sharing Rates (%)	Growth (%)
1.	2012	62.44	-
2.	2013	63.22	1.25
3.	2014	66.35	4.95
4	2015	74.27	11.94
5.	2016	72.66	(2,17)
6.	2017	72,57	(0,12)

Source: Sharia Banking Statistics, 2018

Table 3 shows that the level of profit sharing in sharia banking fluctuated from 2012 to 2017. The most striking change occurred in 2015 with a growth of 11.94%. In 2017 the rate of profit sharing offered by sharia banks decreased compared to the previous years, but still in a positive trend. Based on this fact, there is a tendency for a positive relationship between financing demand and profit sharing. Whereas in 2013, demand for exports increased by 13.56 % as well as rate of profit sharing that increased by 1.25%. This can be interpreted that the increasing rate of profit sharing attracts customers in choosing financing in sharia banking. This is the gap focused by the research as it is interesting to examine the level of sensitivity of the demand for financing in Riau Province.

Based on the background of the problem, this research aims to examine the level of sensitivity of profit sharing, conventional bank's interest rates, and gross regional domestic products (GRDP) on the demand for financing in Riau Province. Since it is an interesting matter to be investigated, this research is entitled "**SENSITIVITY ANALYSIS OF THE DEMAND FOR FINANCING IN RIAU PROVINCE**"

#### 1.1 Research Problems

From the description of the aforementioned background, the formulated research problems are as follows:

- Do profit sharing, conventional bank's interest rate, and gross regional domestic products have significant influences on the demand for financing in Riau Province?
- How is sensitivity of the demand for financing in Riau Province?
- How are sensitivities of profit sharing and conventional bank's interest rate in Riau Province?
- How is sensitivity of the financing demand income in Riau Province?

#### 1.2 Research Objectives

The objectives of this research are:

- To analyze the influences of profit sharing, conventional bank's interest rate, and gross regional domestic products on the demand for financing in Riau Province
- To analyze sensitivity of the demand for financing in Riau Province
- To analyze sensitivities of profit sharing and conventional bank's interest rate in Riau Province
- To analyze income sensitivity of the demand for financing in Riau Province

## 2. Literature Review

According to Muhammad (2004: 113), demand is the amount of goods requested at a particular market at a certain price level at a certain level of income and in a certain period.

The law of demand is a principle that buyers will ask for more products when their prices fall and ask fewer products when prices increase. (Karl, Dkk 2002: 83).

Muhammad (2004: 114) points out that the law of demand states "If the price of an item rises, then the demand for the goods will decrease. Conversely, if the price of the item falls, the demand will rise". The law of demand can be applied if the required assumptions are fulfilled, namely *ceteris paribus*.

Demand that a person or society has for an item is determined by many factors as follows (Sukirno, 2009: 76).

- Price of item  
If the price of an item becomes cheaper, then the demand for the item will increase, and vice versa if the price of an item is expensive, the demand for that item will decrease.
- Price of other related items  
The connection between the use of the two consumptive goods can basically be distinguished into two types, namely:  
Substituted relation  
Complementary relation
- Household income and average income of society  
This factor is an important determinant in the demand for an item. In general, the greater the income of consumers, the greater is the demand.
- Pattern of income distribution in society

Income distribution can also affect demand patterns for various types of goods.

e. Taste of society

Taste of society in general changes from time to time.

f. Total population

Population growth does not automatically lead to increased demand, but normal population growth is followed by developments in employment opportunities.

g. Predictions regarding future conditions

Estimates can be described as consumer events and expectations, especially for future prices. Consumer expectations that prices will become higher in the future will encourage them to buy more at this time.

The demand function is a demand expressed in a mathematical relationship with the factors that influence it. With the demand function, the relationship between dependent variable and independent variable can be found out (Rahardja and Manurung, 2008: 24).

Changes in the number of demanded goods occur for two main reasons, namely changes in price factor and changes in non-price factor (*ceteris paribus* factor). The price factor is when the price of an item itself changes. If there is a price change, it will have an impact on the change in the quantity of goods requested, but the change only occurs in the same curve. This is called movement along demand curve.

If non-price factors change, it will result in changes in demand. This change in demand is indicated by a shift in the demand curve to the right or left, which means that changes in non-price factors (eg rising consumer income, *ceteris paribus*) will cause changes in demand (increasing demand), for example at a fixed price level, the quantity of demanded goods also increase.

Financing is one of the main tasks of sharia banks, namely provision of funding facilities to meet the parties that constitute the unit deficit. (Antonio, 2001: 160).

The factors affecting demand for financing are as follows:

a. Profit sharing

According to Antonio (2001), Muhamad (2002), and Karim (2004) in Pratin et al (2005), the level of financing costs (profit margins) affects the number of the demand of sharia financing. If the level of profit margin is lower than the average national banking interest rates, sharia financing is increasingly competitive. The higher the profit sharing set by sharia banks, the lower is the demand for financing. Conversely, the lower the profit sharing that is set, the higher is the demand for financing (M. Nadratauzzaman: 2009)

b. Conventional Bank's Interest Rate

Increased interest rate is a dilemma in sharia banking at this time, because there will be a transfer of funds from sharia banks to conventional banks. However, there are also benefits obtained by sharia banks with rising interest rate, namely the demand for financing (credit) in sharia banks by customers that is expected to increase along with rising interest rate in conventional banks (Antonio, 2001).

c. Gross Regional Domestic Product (GRDP)

Demand for financing has an influence on income. As explained in Adiwarmar Karim (2007: 187), the higher the level of one's income, the higher is the demand for money to facilitate transactions in goods and services. According to Metwally (1995), increased income will increase the demand for money by the public for a certain level of income affected by zakat (Huda, 2009: 148).

The amount of financing demand is affected by price factors and non-price factors. In this case, the price factor is profit sharing whereas the non-price factors are conventional bank's interest rate and gross regional domestic products.

According to the Indonesia's Law Number 10 Year 1998 dated 10 November 1998 regarding banking, bank is delineated as a business entity that collects funds from the public in the form of deposits and channels the funds to the public in other forms to improve the lives of many people. (Roswita, 2000: 25)

Besides, in reference to the Law Number 7 Year 1992 regarding banking, it is declared that bank is a business entity that collects funds from the public in the form of deposits and distributes the funds to the public in order to improve the living standards of many people (Kasmir, 2013: 24).

Bank is also defined as a financial institution whose business activities are collecting funds from the community and channeling the funds back to the community and providing other banking services (Kasmir, 2008: 2).

Additionally, Manurung and Raharja (2004: 118) mention that bank is a financial institution that collects deposit funds and provide loans.

Bank is an agency whose main task is to be a financial intermediary that channels funds from parties who have excessive funds (*deficit units*) at a specified time (Dendawijaya, 2000:15).

The success of a bank in fulfilling the purposes is influenced by the following factors (Triandaru, 2006: 95):

a. Public trust on the bank.

b. Estimated level of income to be obtained by depositors is higher than income from other investment alternatives with a balanced level of risk.

- c. Risk of depositing funds.
- d. Services provided by banks to depositors.

Sharia banks are those with profit sharing patterns as the main basis in all operations, such as in the forms of funding, financing, and in other products (Ascarya, 2008: 2).

In their activities, sharia banks serve as fund collectors and to provide and impose rewards on the basis of sharia principles, namely buying-selling and profit sharing in the context of fund channeling (Triandaru, 2006: 153).

Based on the Law of Banking Year 1992 and confirmed again with the issuance of the Law Number 10 Year 1998, the types of banking are as follows:

#### Commercial Banks

These banks function to carry out business activities conventionally or based on sharia principles in their activities to provide services in payment traffic. The nature of the services provided is general in the sense that it can provide all existing banking services. Similarly, the area of operations can be implemented throughout the nation. The type of the banks are also called conventional banks.

#### *Bank Perkreditan Rakyat (BPR)* or People's Credit Bank

These banks function to carry out their business activities conventionally, but based on sharia principles their activities do not provide services in payment traffic. This means that BPR activities are much narrower compared with commercial bank activities.

In sharia, the principle of profit sharing is based on the principle of *Mudharabah* where banks will act as *Mudharib* (fund managers) while depositors are *Shahibul Maal* (funders) (Antonio, 2001: 95).

Collaboration between parties with a profit sharing system must be carried out transparently and fairly. This is because level of profit sharing in a certain period cannot be conducted unless there must be a financial report or trusted recognition. If at this stage this cooperation agreement has been approved by the parties, all aspects related to the business must be agreed upon in the contract, so that the parties can remind each other. (Ridwan, 2004: 120).

The concept of profit sharing consists of the following:

- a. The fund owner will invest funds through sharia financial institutions that act as managers;
  - b. The managers or the sharia financial institutions will manage these funds in the *pool of funds* system then invest the funds into a feasible and profitable project or business and meets the aspects of sharia;
  - c. Both parties sign a contract containing the scope of cooperation, nominal, ratio and period of agreement validity.
- The profit sharing method consists of two systems:
- a. Profit Sharing
  - b. Revenue Sharing

### 2.1 Relationship between Profit Sharing and Demand for financing

If the profit sharing rate taken by sharia banks is low, the demand for financing by public will get higher, or the financing channeled by sharia banks will also increase. On the contrary, if the profit sharing rate set by sharia banks is high, the lower is the desire of public in requesting for financing in sharia banks, because banks are the capital partner who only gets benefits.

### 2.2 Relationship between GRDP and Demand for financing

Demand for financing has a close relationship with GRDP. With the increase in GRDP due to solid economic conditions, the level of public consumption will increase. Therefore, if GRDP increases, the demand for financing will also increase in order to meet the level of consumption needed by public. In contrast, the demand for financing will fall if GRDP of a country decline.

If the credit interest rate of conventional banks increases, public ability to pay the interest rate of conventional banks will decrease. As a result, the demand for credit in conventional banks will also decrease. This will affect public to choose sharia banks as an alternative to get capital and the demand for financing in Sharia banks will increase.

### 2.3 Sensitivity

The concept of sensitivity can be used to answer about causal relationships, action-reaction, between one variable and another. One variable will change at certain percentage if another variable changes by the certain percent. Such an analysis is popular with the term of elasticity ( $\epsilon$ ).

There are three important factors that influence the demand for financing in sharia banks, namely the price of goods, which in this case are proxied by profit sharing, the price of other goods which are proxied by conventional bank's interest rate, and the income proxied by GDRP.

In this research, the relationship between the independent variables and the dependent variable is analyzed as follows:



### 3.1 Estimation Equation Analysis

Here is the summary of the processed research data using EViews 9.

**Table 4. Summary of Analysis of the Influence of Profit Sharing, Conventional Bank's Interest Rate & GRDP on the Demand for Financing in Riau Province in 2006-2017 Period**

Variable	B	Std. Error	t- count	Sig.	R <sup>2</sup>	F- count	Sig.
C	-14,45656	1,430437	-10,106939	0.0000	0.993608	570.9730	0.0000
LNBH	-1,399219	0,466990	2,996251	0.0172			
LNTBBK	-0,424496	0,112476	-3,774097	0.0054			
LNPDRB	1.306549	0.076965	16,97582	0.0000			

Source: Results of EViews 9 (processed), 2018

Based on Table 4, the multiple linear regression equation is obtained as follows:

$$LNDP = -14.45656 - 1.399219 * LNBH - 0.424496 * LNTBBK + 1.306549 * LNPDRB$$

The multiple linear regression equation above is re-described in general equation in the form of non-linear (square) function, namely:

$$DP = -14.45656 BH^{+1.399219} TBBK^{-0.424496} PDRB^{+1.306549}$$

Before the regression equation was used for further analysis, several tests were carried out as explained in the following section.

### 3.2 Classical Assumption Test Results

The multiple linear regression equation must be the best linear unbiased estimation/BLUE, thus the classical assumption was tested.

#### a. Normality Test

To detect whether the data were normally distributed or not, they could be tested using Kolmogorov Smirnov. The results are displayed in Table 5.

**Table 5. Normality Test Results**

	LNDP	LNBH	LNTBBK	LNPDRB
Mean	7.589039	4.227027	1.920759	12.97036
Median	7.878824	4.232810	1.943353	13.16312
Maximum	8.586346	4.307707	2.277267	13.46692
Minimum	6.167516	4.134206	1.547563	12.02616
Std. Dev.	0.805493	0.069007	0.233566	0.503986
Skewness	-0.478066	-0.112286	-0.193818	-0.661323
Kurtosis	1.831895	1.294975	2.118484	2.020131
Jarque-Bera	1.139327	1.478771	0.463666	1.354770
Probability	0.565716	0.477407	0.793079	0.507944

Source: Results of EViews 9 (processed), 2018

Kolmogorov Smirnov test results in Table 5 above show that the probability values of all observed variables are greater than 5%. This meant that all variables of research including demand for financing, profit sharing, conventional bank's interest rate, and gross regional domestic products were normally distributed.

#### b. Autocorrelation Test

The autocorrelation test in this research was done by performing the Breusch-Godfrey Test (BG test), or also known as the Lagrange-Multiplier Test (Lagrange Multiplier) 6.

**Table 6. Autocorrelation Test Results**

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.767233	Prob. F(2,6)	0.5050
Obs*R-squared	2.443916	Prob. Chi-Square(2)	0.2947

Source: Results of EViews 9 (processed), 2018

The probability value of **Obs\*R-squared** is 0.2947 which is greater than 5% indicating that the data do not contain autocorrelation problem.

#### c. Heteroscedasticity Test

This test was executed to test whether in the regression model there was a residual variable inequality from one observation to another. The test method used was the White Test. The basis for decision making on heteroscedasticity test is: if a significant value is greater than 0.05, the heteroscedasticity does not occur, and if a significant value is less than 0.05, the heteroscedasticity occurs.

**Table 7. Heterocedasticity Test Results**

Heteroskedasticity Test: White			
F-statistic	0.316691	Prob. F(9,2)	0.9086
Obs*R-squared	7.051768	Prob. Chi-Square(9)	0.6317
Scaled explained SS	3.802675	Prob. Chi-Square(9)	0.9239

Source: Results of EViews 9 (processed), 2018

The probability value of **Obs\*R-squared** is 7.051768 and the probability value is 0.6317 far greater than 5%. In conclusion, the research data are not heteroscedastic.

d. Multicollinearity Test Results

Multicollinearity test was done using the VIF (Variance Inflation Factor) method and the tolerance value of each independent variable to the dependent variable. The cutoff value commonly used to indicate the presence of multicollinearity is the tolerance value <0.10 or equal to the VIF value > 10 (Ghozali, 2005).

**Table 8. Multicollinearity Test Results**

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	2.046150	5920.555	NA
LNBH	0.218080	11277.59	2.754460
LNTBBK	0.012651	136.8794	1.830521
LNPDRB	0.005924	2887.482	3.990819

Source: Results of EViews 9 (processed), 2017

Based on Table 7, the VIF values for the independent variables consisting of profit sharing, GRDP, and conventional bank's interest rate respectively are 2.754460, 1.830521, and 3.990819 smaller than 10, thus it is concluded that the regression model is free from multicollinearity.

3.2 Statistical Testing

After testing the classical assumptions, the statistical testing was performed. Based on Table 4, it was found that:

a. Partial Test Results (t test)

1. Partially profit sharing had a negative and significant influence on the demand for financing in sharia banking in 2006-2017 period.
2. Partially conventional bank's interest rate had a positive and significant influence on the demand for financing in sharia banking in 2006-2017 period.
3. Partially GRDP had a positive and significant influence on the demand for financing in sharia banking in 2006-2017 period.

b. Simultaneous Test Results (F test)

Simultaneously, profit sharing, conventional bank's interest rates and GRDP had significant influence on the demand for financing.

c. Results of Multiple Determination Coefficients (R<sup>2</sup>)

The value of Adjusted R Square was 0.9936, meaning that the contribution of the influence of the independent variables (profit sharing, conventional bank's interest rates, and PDRB) on the dependent variable (demand for financing) was 99.36%, while the remaining 0.64 % was influenced by other variables excluded in this research model.

3.3 Economic Testing

From the results of economic testing, the regression coefficients of profit sharing, conventional bank's interest rates, and GRDP were in accordance with the theories. With the results of economic testing in line with theories, the obtained equations can be used for further analysis, by first aligning with statistical tests and classical assumption tests.

From Table 4, the influence of profit sharing, conventional bank's interest rates, and GRDP on demand for financing in Riau Province in 2006-2017 period can be seen. There are also results of multiple linear regression analysis with classical assumptions, statistical tests, and economic tests

3.4 Sensitivity Analysis

Results of the estimation of the non-linear equation are as follows:

$$DP = -14.45656 BH^{+1.399219*} TBBK^{-0.424496*} PDRB^{+1.306549*}$$

a. Elasticity of Demand for Financing

Calculation of the price elasticity of financing demand was known that the profit sharing variable had an elasticity value of positive 1.40 ( $\epsilon_p > 1$ ), hence it was categorized as an elastic demand for financing.



#### b. Cross Elasticity of Financing

Calculation of the cross elasticity was positive 0.42. ( $\epsilon_c > 0$ ), and it was categorized that conventional bank's interest rate as the substitution of profit sharing.

#### c. Income Elasticity of Demand for Financing

Calculation of the income elasticity of demand for financing was known that GRDP had an elasticity value of positive 1.31 ( $\epsilon_i > 1$ ), meaning that the financing was categorized as luxurious goods.

### 3.2 Discussion

#### 3.2.1 Sensitivity Analysis of Price Elasticity of the Demand for Financing

Based on the above non-linear equation, it was found that price elasticity of the demand for financing in sharia banking in Riau Province had a value of 1.40. The 1.40 elasticity value of the financing demand was categorized as an elastic demand ( $\epsilon_p > 1$ ), where  $1.40 > 1$ . This indicated that if there was a change in the price of an item (in this case profit sharing) of one percent, it caused a change in the amount of demand for an item (in this case the demand for financing) of 1.40 percent.

Value of the price elasticity of the demand for financing as much as 1.40 also meant that if there was an increase in profit sharing by one percent, the total demand for financing was reduced by more than one percent, namely 1.40 percent. Therefore the elasticity value of the demand for financing ( $\epsilon_p$ ) was greater than one, thus the demand for financing in Riau Province was still elastic.

The elastic demand for financing in Riau Province is expected to change to be inelastic in the future. This change can be indicated by the increased level of the people's religiousness in Riau Province. This is certainly in line with the visions and missions of the Riau Province.

#### 3.2.2 Cross Elasticity of the Demand for Financing

The non-linear equation result above showed that the cross elasticity of the demand for financing demand in sharia banking in Riau Province was positive at 0.42 ( $\epsilon_c > 0$ /positive), namely  $0.42 > 0$ . Positive cross-elasticity value of the demand for financing at 0.42 meant that conventional bank's interest rate was a substitution of profit sharing. In other words, increased conventional bank's interest rate would increase the demand for financing. The greater the cross elasticity value of the demand for financing, the greater was the increase in the demand for financing.

The cross elasticity value of financing ( $\epsilon_c$ ) was 0.42 greater than zero ( $\epsilon_c > 0$  or positive, meaning that if there was an increase in the conventional bank's interest rate by one percent, the amount of the demand for financing in Riau Province would increase by 0.42 percent. This situation could be interpreted that the conventional bank's interest rate was a substitution of profit sharing. Increased conventional bank's interest rate caused profit sharing to be relatively more profitable, hence the demand for financing would increase. Increased demand for financing is expected to encourage the real sectors, and in the next stage it can elevate the demand for financing again.

#### 3.2.3 Income Sensitivity of the Demand for Financing

Based on the calculation of income elasticity of the demand for financing in Riau Province, it was found that GRDP had an elasticity value of positive 1.31. This positive income elasticity value was categorized as *luxurious goods* ( $\epsilon_i > 1$ ), where  $1.31 > 1$ . The result of this calculation indicated that the increased GRDP in Riau Province would elevate the demand for financing, and the greater the value of income elasticity, the greater was the increased demand for financing.

Further, the income elasticity value of financing at 1.31 indicated that if there was an increase of GRDP by one percent, it would cause the amount of the demand for financing increased beyond one percent namely 1.31 percent. Therefore the income elasticity value of financing ( $\epsilon_i$ ) was greater than one ( $\epsilon_i > 1$ ). In conclusion, the demand for financing in Riau Province in the category of luxurious goods.

Since the demand for financing in Riau Province was categorized as luxurious goods, this condition indicated that the demand for financing was still relatively small in increasing production activities (real sectors) from the Micro, Small and Medium Enterprises (MSMEs). In addition, it was also caused by an increase in Non-performing Finance (NPF) or bad financing from these MSMEs. Finally, it is expected that the demand for financing in Riau Province in future can be changed from the category of luxurious goods to essential goods.

## 4. Conclusions and suggestions

### 4.1 Conclusions

- Profit sharing, GRDP, and conventional bank's interest rate simultaneously had significant influences on the demand for financing in sharia banking. Further, partially profit sharing had significantly negative influence on the demand for financing, GRDP had significantly positive influence on the demand for financing, and conventional bank's interest rate had significantly positive influence on the demand for financing. The results were consistent with the hypothesis of this research, with the amount of influence ( $Adj.R^2$ ) of 99.36%.
- Price elasticity value of the demand for financing in sharia banking was categorized as sensitive at 1.40 or

- $\epsilon_p > 1$  during the observation period, thus the demand for financing in sharia banking was elastic.
- Cross elasticity value of the demand for financing in sharia banking was 0.42 or  $\epsilon_C > 0$ , categorized as conventional bank's interest rate for substitution of profit sharing. The increase in the interest rate of conventional bank caused the relative profit sharing to be more profitable that made the demand for financing increased.
  - Income elasticity value of the demand for financing in sharia banking during the observation period was 1.31 or  $\epsilon_I > 1$ , and it was categorized as luxurious goods.

#### 4.2 Suggestions

From the aforementioned conclusions, a number of suggestions are presented as follows:

- With the elastic nature of the demand for financing in Riau Province, it is expected that sharia banks will not increase profit sharing in order to maintain the financing demand, or at least they will maintain it at a minimum level.
- The demand for financing with a large cross-elasticity of zero (positive) clearly indicated that the people had not optimally implemented their *muamalah* worship, or they still separate their worship from *muamalah* (secular). This is evident that the majority of the people of Riau Province ( $\pm 90\%$ ) made the profit sharing as a substitution of the conventional bank's interest rate. It is expected that many parties, the government agencies, authorities, as well as the financial services industry actors go hand in hand to educate the people to behave and act in accordance with sharia.
- Since the demand for financing was categorized as luxurious goods, it is expected that sharia banks are able to respond to the demand for financing professionally with a hope that there will be an increase in real sector economic activities in line with the government's active roles, in this case BI and the Financial Service Authority (OJK), to optimize the revenue in Riau Province.
- It is suggested for the future research to add other macroeconomic variables such as income per capita, and other demographic variables such as the population of both Moslems and non-Moslems, as well as the efforts made by banks to increase the demand for financing (promotion), as well as policies carried out by BI and OJK.

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