

INFLUENCE ANALYSIS OF SOCIAL VALUES ON THE NUMBER OF ISLAMIC MONEY DEMAND IN INDONESIA

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Abstract

As one of the existing instruments in the economic system of Islam, Zakat Becomes Important to Investigate its influence in the Formulation of monetary policy in Indonesia, especially relating to the amount of money. This paper analyzes whether Zakat will of affect, the money demand of Islam in Indonesia, by applying the Vector Error Correction Model (VECM) on monthly data During 2001 to 2007. This paper derives Trust interesting results on both conventional and Islamic money demand in Indonesia. In general, the result confirms the Domination of conventional economic system, one relative to the Islamic (Sharia), while the social value does not significantly affect the money demand in Indonesia.

JEL Classification: C32, E41, P52

Keywords: Money demand, social values, Islam, the VAR / VECM

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I. INTRODUCTION

Money as an exchange tool had been well-known since 4000 BC, in Islam world, money functioning as an exchange tool is dinar (gold money) and dirham (silver money) that had been used since Islam came on the hemisphere especially in *muamalah*, zakat, or diyat (fine payment) activities. Standardization of both dinar and dirham money follow Hadits by Rasulullah SAW narrated by Abu Daud in which the weigh is based on Makkah people, and the measurement is based on Madinah people. In 642 AD, Khalifah Umar bin Khattab formally standardized the dinar and dirham weigh and measurement which is 7 dinars is equal with 10 dirhams. According to Chapra (1996), the comparison ration between dinar and dirham is 1:10.

Money is also used to do one of Islam's worship and one of the monetary instruments containing social value such as infaq, shadaqah, and waqaf, as Karim (2007) in viewing economic stability through Chapra money demand equation. There are actually three roles played by zakat in economic prespective, they are as an income and welfare redistribution, a stabilizer of economic, and a development instrument and empowerment of *dhuafa* (poor people).

In case of zakat, infaq, shodaqoh, and wakaf in Indonesia, they have an extraordinary potency because according to Statistic Centre Board (BPS,2000) the Muslim population is 85% of all Indonesian. According to the research done by Language and Culture Center of UIN Syarif Hidayatullah, cash potency is about 14,2 trillion rupiahs and good potency is about 5,1 trillion rupiahs annually.

Development of Syariah Banking in Indonesia is represented in Islamic Banking or is abbreviated as ib socialized by Bank of Indonesia. After considering some Syariah Banking development aspects, we have to know the characteristics of Islamic economy or finance that have a social value. According to Chapra (1996), the one categorized as social value is all things that are not prohibited by Islam and have a social value (zakat, infaq, wakaf, and shodaqoh) influencing money demand, thus other proposed monetary instruments by Chapra for Islamic economic system is Islamic M1 development target consisting currency and clearing account money and Islamic M2 consisting M1 added by mudharabah saving and mudharabah deposit investment; Public Share of Demand Deposit; Statutory Reserve Requirement and Credit Ceiling. Social values instrument influence the target of Islamic M2 and M1 development, that is M1 which is a non-interest loan used to provide residence, health facilities, and education for poor people.

From the above monetary instruments, we can clearly see the essential differences from those two systems in which in conventional economic system we recognize interest whereas in Islamic economic system, we recognize a profit share (*mudharabah*) system and it must perform

a social value. After having a previous research regarding to interest and profit share concepts, thus the writer will empirically prove whether *social values* concept influence monetary stability and we can see it through its influence towards money demand in Indonesia. Furthermore, we will discuss about theory points of view, the third part is data source and research methodology used and the forth part is analysis result and discussions. At the end, we will have conclusion and suggestion.

The purposes of this research are 1) to analyze Islamic money demand function (M1 and M2) on finance / banking system specialized on currency, wadi'ah clearing account, *mudharabah* saving, and *mudharabah* investment deposit in Syariah banking and 2) to analyze the influence of social values in money demand function and to know the whether significant connection or affection between the number of circulating money exist in Islamic economic system with the *social values* instrument.

The second part of this paper discusses about the theory and points of view of existing literature and the third part will discuss about methodology. The forth part discusses about the estimation result and tentative conclusion analysis will be given at the end of the paper.

II. THEORY

II.1. Difference between Islamic and Conventional Economic System

Difference of economic systems above can be represented in three economic systems. They are capital, Islam, and Marxism economic systems. The comparisons can be seen in Table V.1. below.

Tabel V.1 Comparisons of Capital, Islam, and Marxism economic system			
Compared Aspect	Conventional		Islam
	Capitalism	Marxisme	
Philosophy in production, distribution, and consumption	Laissez Faire that explains freedom and invisible hand	Class struggle and contradiction among classes	Faith to Allah and life after death, and just look for Allah's bless and mercy
Principle of ownership and interaction access	Absolute ownership and free market	Ownership belongs to government so the access is restricted	Right of use is not ownership (only until death) and balance and justice
Operational	Free from entry/exit (in perfect competition) or free to determine a price in monopolistic market	Iteration and collective work pattern	Existing Zakat and Wakaf instruments, riba prohibition and Qirad Mudharabah

Source : Iqbal (2007)

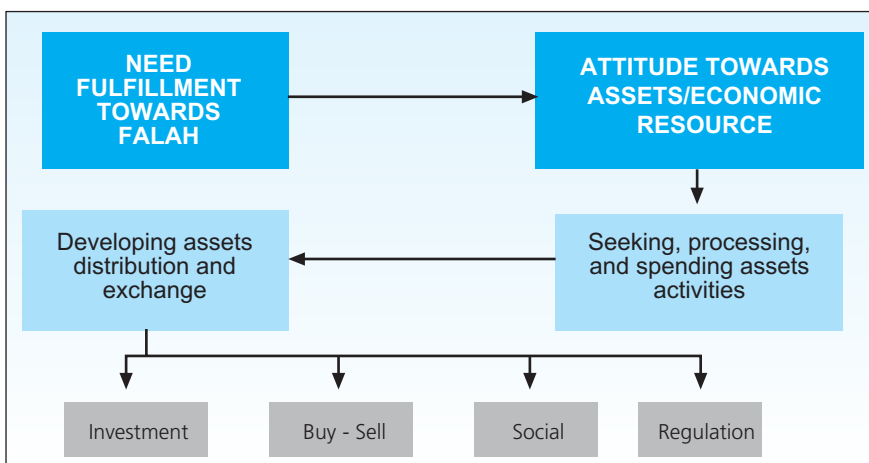
II.1.1. Difference among Capital, Marxism, and Islamic Economic System

There are some points of view in understanding differences and opinions regarding to economic system, but we can generally differentiate into system coming from Al-Qur'an and not coming from Al-Qur'an and Hadits.

Karim (2004) explained that there are four developing economic system in the world nowadays, they are capitalism, socialism, communism, and Islam. Capital economic system is a system dominated by capital with profit motive in which money is everything. In the capital economic system, there is a freedom of doing economic activities with its widely used interest instrument. One of capital economic characteristics is individual actions with no centralized economic plan.

Socialism economic system doesn't recognize any private ownership, just public ownership. The existing industries are just for public interest or social service motive. One of the socialism economic system characteristics is *central planning* of the economy, fair income distribution establishment, and any vital assets belong to the public. Marxism is a kind of communism in which consumption and production arranged collectively emphasizing on social program and education, come from science, and deny the God. Thus, they allow any practices to gain collective happiness.

Unlike Islamic economic system, on Figure V.1, we can see how people act to assets and economic resource that just focus on earning, processing, and spending assets. Through the action, it implies assets development, assets exchange, assets distribution. Sakti (2007).

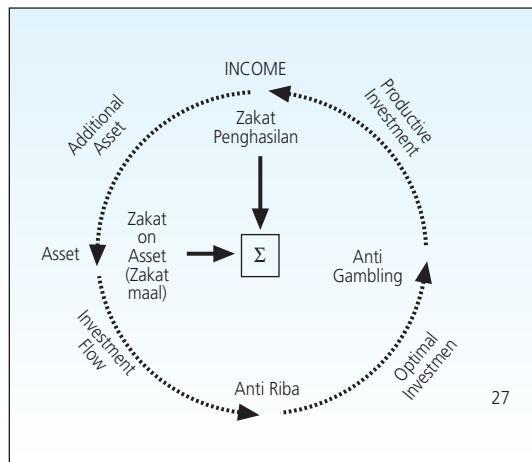


Source : Sakti (2007)

Diagram V.1.
Characteristics based on Islamic Economic System

Earning assets in Islam can be done through economic activities. It can be done by investment activity or *mudharabah* and *musyarakah*, buy and sell activity such as *murabahah*, *ijarah*, *istisna*, *salam*, and *rahn*. Whereas any people who have no access to both previous activities, they can earn the assets through other instruments in economic mechanism of Islam such as social activities (*infaq*, *shadaqah*, *hibah* and gift) and regulation activities (*zakat*, heritage, *kharaj*¹, and *jizyah*²).

In general, Himawan (2005) explained that Syariah economic system is a system using zakat approach, prohibiting *riba* (loan payment with extra interest) and *maisyir*, or in other words we can say it is a *sunnatullah* economic system encouraging investment flow by optimal zakat and anti *riba* productivity, and anti gamble as seen in Figure V.2 below.



Source : Himawan (2007)

Diagram V.2.
Flow Theory

If we concern on the development, there are 4 economic opinion development, (Karim, 2004). They are foundation period (The beginning of Islam-450H / 610-1059 AD), development period (1068-1446 AD), declining period (1446-1931 AD), and resurrection period (1932-2000s AD). Tradition and practice during Rasulullah SAW period using Islamic principles is Allah SWT as the truly owner, and human as *khalifah* in the world; all things that human earn are based on Allah’s permission; wealth must circulate and mustn’t be piled up; economic exploitation in any situations is omitted and to apply heritage system as a wealth redistribution instrument. In Rasulullah period, Islamic economic system was applied by accelerating money circulation,

1 *Kharaj* is tax on agriculture land

2 Poll tax that early Islamic rulers demanded from their non-Muslim subjects

establishing baitul maal, and forming fiscal policy. In acceleration the money circulation, Rasulullah SAW prohibited the tendency of preventing dinar and dirham came out from the circulation; money interest; preventing stuck money from stockholder and eliminating monopoly practice after *Fath Al-Makkah*.

Beside that, Baitul Maal establishment could be seen from its income such as Kharaj, Zakat, Khums, Jizyah, and other payment like kaffarah. We could also see the Baitul Maal expenses used to spread Islam, culture and education, science development, infrastructure development, army establishment, and social welfare service. Moreover, one of Rasulullah's fiscal policy is to increase GDP by Muhajirin and Anshar union and to apply job vacancy policy for Muhajirin people by implementing *Muzara'ah, Musaqah, and Mudharabah*.

After Rasulullah SAW leadership ended, Khulafaur Rasyidin began. Started from Khalifah Abu Bakar Ash-Shiddiq, the economic practice concerned much on the accuracy of zakat accumulation, wealth from different people could not be aggregated, the aggregated wealth could not be separated, and distribution is directly to Baitul Maal (no saving). Then the economic practice during Khalifah Umar bin Khattab was a regular and permanent Baitul Maal establishment and its brands in province capital cities; to make Baitul Maal as a daily executor of fiscal policy of Islamic country; to make a kind of saving in Baitul Maal as an emergency back up, to make Baitul Maal properties as Muslim's wealth and the decision maker was The Khalifah. Beside that he also established the first Diwan Islam which is called as al-Divan; introduced other country's income such as *foy* (assets plundered from war), *ushr*, *Nawaib*, ransom for war prisoner. During Khalifah Umar bin Khattab governance, there were some classifications between country's income and expenses.

During the next Khalifah governance, Ustman bin Affan, the economic activities were broaden by increasing the expenses on marine and military, increasing expenses on pension allowance, and development for the new occupied areas, giving responsibility the zakat estimation to muzakki, and allowing land exchange. However, the economic practices done by the previous khalifahs were keep being continued. After Khalifah Utsman bin Affan governance ended, the next khalifah, Ali bin Abi Thalib changed the system of zakat collection, eliminated marine expenses, distributed Baitul Maal directly and introduced people's money distribution by adopting weekly distribution system.

II.1.2. Conventional Monetary System

Conventional monetary system begins with the conventional economic theories developed long time ago. The development of economic thought starting from pre-classical school of

economics, classical economics, Marxism, neo-classical; historical; Institutional; Keynes; monetarists, *supply siders* and *the rationale expectation* progressing onward to the present. The development of conventional monetary system primarily in terms of demand for money, are very clear at the time of monetarist school birth, which is based on the opinion keynessian criticism about the need for government intervention in directing and guiding the economy as desired. The figures are divided into two groups, namely young and old groups. One of the most underlie the development of this genre is Milton Friedman who sees that the role of government is necessary for a more effective economy.

Moreover the main aspect of monetarist principles is where the monetary developments is one important element in production development, employment and prices. Monetary flow is also suggested that the growth in money supply represents a reliable element in monetary developments. In his article, Friedman (1970), stated that changes in the money supply is very influential on the level of inflation in the long term and also the behavior of real GNP. Beside that, monetarist stated that there were some market power and resource influence stating that the decline interest rates would encourage investment and lower prices will encourage consumption level (*the Pigou effect*).

Another thing is the opinion of the monetarist economic regarding to economic fluctuations due the expansion money supply caused by expansionary policies taken by the government. We can see that monetarist run the economy from the monetary side which is the opposite of the Keynesian school.

II.1.3. Islamic Monetary System

The monetary system is closely linked to monetary instruments, one of them money, then before to understand about it, we need to understand the concept of money in Islam. According to Al-Ghazali, money is the measurement standard (unit) to avoid fraud and cheating, money is needed to solve the problems of a barter system, dinars and dirhams is the master when compared to other kinds of wealth and the main characteristics of money is like a mirror that reflects the color but he himself doesn't not have a color in accordance with the concept of neutrality of money.

According to Ibn Taymiyyah, money is the standard value (*mi'yar al-amwal*) and is a medium of exchange, besides the money was never intended to be consumed. The money was used to obtain other goods (medium of exchange) and is not for sale. Ibn Taymiyya argued about the concept of *fulus* volume (money) should be proportional to the volume of transactions where the price level is determined, and this concept in the conventional theory is called the

quantity theory of money. Meanwhile, according to Ibn Khaldun, money is the standard measurement and also a *store of value*. According to Ibn Khaldun, gold and silver are a form of money that are not easily fluctuate and relatively stable.

After knowing the concept of money in Islam, then according to Beik (2007), we need to know the concept of central banks and monetary policy based on Islamic principles. The objective of monetary policy in Islam is the achievement of *full employment* conditions in which all factors of production can be optimized to use, ensuring the stability of the currency and price (inflation control) and the tool of redistribution of wealth where wealth is synergized between financial sector and real sector. Meanwhile, the central bank function is to regulate the circulation of money and control the money supply, as *financial market* regulators and ensure the honesty of the *profit* and *loss* statements of the banking sector and carry out regular audits.

The function of the central bank through monetary instruments such as changing the *high-powered money*, through the reserve ratio, liquidity ratio, sales and purchases of *Central Deposit Certificates* and other valuable documents, changing the profit-sharing ratio; set *qard hassan ratio* and controlling the exchange rate.

In Ascarya (2006), there are three fundamental differences over the Islamic monetary system with a conventional monetary system, as shown in Table 2.2. below. The first and the most distinguishing difference is interest system in the conventional economic system while the Islamic economic system offers profit sharing (*profit and loss sharing*), sharing system ensures justice and no party that is crippled in a bear losses when the shareholder cooperate with entrepreneurs to do business. The profit and the loss are beared together.

In a second difference, in the conventional side, there is *fractional reserve banking* system where banks are only required to store the backup in a certain percentage of the collected deposits. With this system, bank has the ability to create another type of *fiat money*, ie bank money (demand deposits, including electronic money), and this happens also when banks make loans. Thus, the system also gives *seigniorage* profit that is unfair that through this system they are given an authority to create new money.

Tabel V.2 Differences in Islamic and Conventional Monetary System	
Conventional	Islam
Interest Instrument <i>Fractional reserve banking system</i> Fiat money use	Profit and Loss Sharing Concept <i>100 percent reserve banking system</i> <i>full bodied/fully backed money</i>

Source : Ascarya (2006)

Whereas in the Islamic economic system there are 100% *reserve banking system*, where this system does not provide opportunities for banks to create new money, because the entire backup must be saved to the central bank. Maximum bank financing can only be channeled to the size of initial deposit only. This causes no new buying power that is created (no *seigniorage*), it does not contain elements of usury (*riba*) and no party is harmed.

Fiat money is something (usually in the form of paper or coin) is recognized as legal tender in a country after being set by the government which does not have a reserve value based on its nominal value. Issuance of fiat money raises new purchasing power from something that does not exist. This gives an unfair advantage (*seigniorage*) for parties who are authorized to publish it and can be categorized as usury.

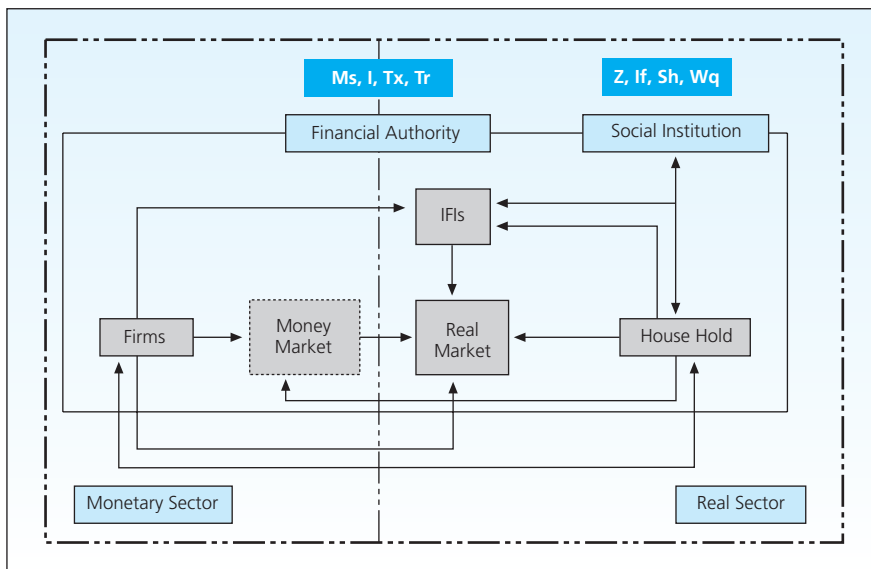
While the money in Islam is money (gold and silver) that has intrinsic value equal to its nominal value or number of the gold reserves held by parties who issues it. Because no new purchasing power created (no *seigniorage*), so it does not contain elements of usury.

Because Indonesia still uses dual monetary system and banking, then that becomes the main differences between Islamic and conventional monetary system which is the existence of profit-sharing concept in Islam that negate the interest.

II.2. Contemporary Islamic Monetary Policy

Islamic Finance in essentially describe real economic activity using various types of transactions such as trade, investment, and financial services. Through Figure 2.3, we can see that in *dual economic system* in many Muslim countries, Islamic finance became amplifying elements balancing the monetary sector, and even strengthening the structure of the real economy. Several things to note is the portion or the contribution of Islamic finance and social sectors if it wants to apply to the national economy.

It can be seen in the picture above that the form of Islamic monetary instrument is the policies that could activate the real sector or press idle money to get into the real sector. In the picture above is the money supply M_s ; i is the interest rate; T_x is a tax; T_r is a subsidy; Z is a charity; I_f the infak; Sh is shadaqah and W_q is the Wakaf



Sumber : Sakti (2007)

Diagram V.3.
Economic Structure of Contemporary Islam.

II.3. Theory of Money Demand

Money demand equation in Chapra (1996) described one variable that has not been used in the theory of demand for money is a social variable values, shown in the equation below:

$$Md = f(Y_s, S, \pi) \tag{V.1}$$

Where Y_s indicate the goods and services in accordance with need fulfillment and productive investment that is in harmony with Islam. Meanwhile, S describes the values - moral and social values (including zakat) which will affect the process of resource allocation and distribution, which will affect the demand for money which is not used for *conspicuous consumption* (over-consumption activities, luxury and speculation). In his research, Umer Chapra has not been able to prove empirically equation 1.2 above, and the hypothesis about the influence of *social values* to total demand for money does not explain whether it effects negatively on long-term or short term.

Previously, according to Mishkin (2001) money as the *money supply* is defined as something that is generally accepted as means of payment for goods and services or debt repayment. The money demand function according to Keynes are:

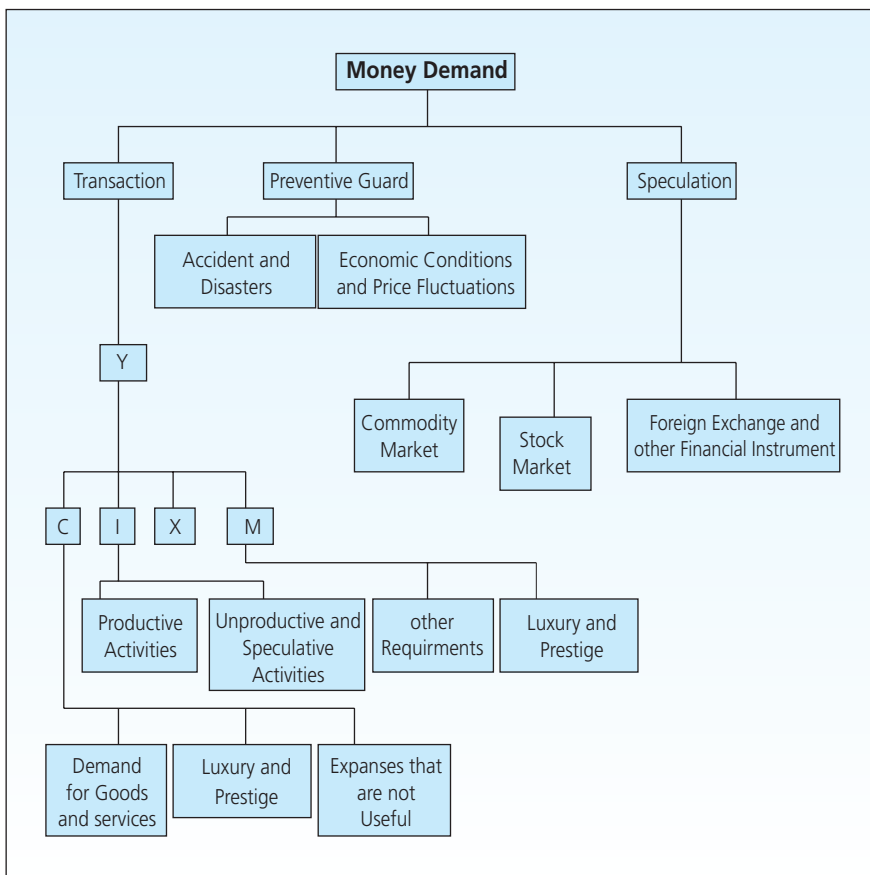
$$Md = f(i, Y) \tag{V.2}$$

where i is a function of the interest rate that varies inversely with the demand for money and real national income Y is a positive influence on money demand. To request the Islamic money on dual banking system, explained in Kaleem (2000), where there is a return variable rate of Sharia as a substitution for interest rates, so that:

$$\ln M_{ISLR}_t = \alpha_0 + \alpha_1 \ln Y_t + \alpha_2 \pi_t \tag{V.3}$$

Where M_{ISRL} is the equilibrium of Islamic real money and Y_t is national revenue.

In Figure V.4 below, it explains the motives of someone saving money, such as, for transaction, anticipation and speculation. However demand is meant by Chapra (1996) in Islamic money demand equation is the demand for money transactions and anticipations.



Source : Chapra (1996)

Diagram V.4.
The principal element of Money Demand

Where there is no element in the transaction for which luxurious consumption or indicate the status or symbols and activities that are not useful. Moreover the investment must be productive, while imports have done to meet the needs that can not be fulfilled by the countries themselves. The speculative activities in the Islamic money demand equation is an activity which is not allowed.

II.5. Wisdom and Benefit of Zakat

In Hafiddudin (2002) opinion, zakat in terms of language has a meaning, namely *al-barakatu* (blessing); *al-namaa* (growth and development); *ath-thaharatu* (purity) and *ash-shalahu* (greatness). The definition of zakat in general is part of the property under certain conditions; that Allah has the owner give it to the one who deserve; with certain requirements as well. Understanding the relationship of zakat literally and terminologically are very close that the property that was issued will be a blessing; grow; develop and grow; holy and good.

Chapra (1985) said that zakat has a positive impact in increasing the availability of funds for investment because the payment of zakat on wealth and property that are saved will encourage taxpayers to seek income from their wealth, so they can pay zakat, without reducing their wealth. Thus, in a society that values of Islam have been internalized, deposits of gold and silver and unproductive wealth tends to be reduced in order to increase investment and generate greater prosperity.

Generally, there are seven lessons and benefits of zakat in Hafiddudin (2002), as a manifestation of faith in Allah SWT; to help the mustahik; as a pillar of charity together (*jama'i*); as one source of funds for the development of facilities and infrastructure owned by Muslims (means of worship, education, health, social and economic) development tools and the quality of Muslim resources; to socialize proper business ethics; as an instrument of income distribution and a strong courage for people to do zakat. Some benefits such as zakat, preventing the accumulation of wealth on the one hand that automatically makes people motivated to invest. Zakat is also a comprehensive institution for the distribution of wealth because it involves the property of every Muslim after reaching nisab. Zakat that is well-managed will be able to open employment and business area as well as assets mastery by Muslims.

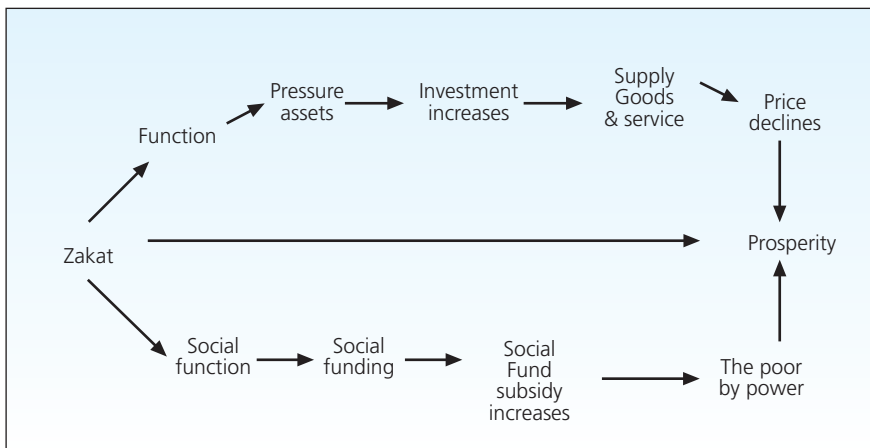
Saefuddin (1986) states that the charity is well managed it is possible to build economic growth, as well as distribution of income, *economic with equity*

Benefits in terms of instilling morals like the glory of nature, a sense of tolerance and toleration to the person paying the zakat, zakat payers are usually identical with the nature of

Rahmah (mercy) and being tender to his brother, who did not have sufficient need fulfillment and contain aspects of the purification of morals.

If we see the *faedah ijtima'iyah* (social aspect), the Zakat is a means to assist in fulfilling the lives of the poor who constituted the majority of most countries in the world; Providing support to the Muslims strength and lifting them. It can be seen in groups recipients of zakat, one of which is the mujahidin *fi sabilillah*; Zakat can reduce social jealousy; zakat will encourage economic growth and the blessing would be abundant and paying zakat means to expand the circulation of property or money, because when wealth is spent then the circulation will be expanded and more party can take the benefit.

Himawan (2005) explained that zakat functions is a solution to inflation as shown in the figure that zakat has a control and social function. Where zakat can lower piled up treasure rate, so it becomes the investment flow. If the flow of investment is high then the procurement of goods and services will also be increased, this led to lower prices. On the other hand zakat and its social function gives subsidies to increase the mustahik purchasing power that will take turn to create welfare.



Source : Himawan (2005)

Diagram V.5.
Zakat functions of Inflation

II.6. Thought Framework

The connection between the formulation of the problem and research objectives can be seen from the research framework in Figure 2.6. where the demand for money in Islam is divided M2IS M1IS and again in their derivatives that were influenced by macroeconomic variables that is Real GDP. As a counterweight in the cost of holding money, the money demand is seen

from the level of return in the Islamic scheme. Then it will also show the influence of social values in the Islamic system, so it can be seen from each classification associated with viewing the number of Islamic money demand for monetary management in Islam.

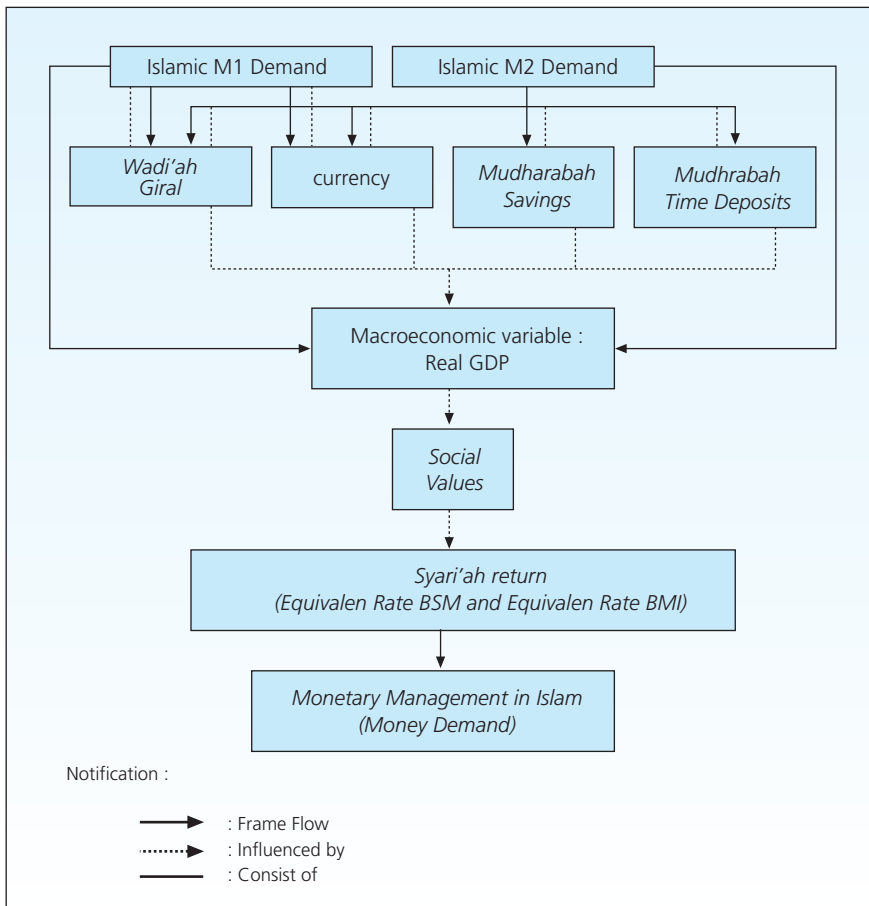


Diagram V.6.
Thinking Conceptual Framework

Based on the description above, there are two main hypotheses developed in this paper, first, Islamic money demand model that is divided in Kartal money element, *wadi'ah* clearing account, *mudharabah* and long-term investment, thus Real GDP positively impact on Islamic money demand and the return of Islamic sharia negatively affect it. Second, *social values* (zakat) negatively affect the demand for money for unproductive activities in the Islamic system on the side of muzakki and positive effect on demand for money on the side of *mustahik*.

III. METHODOLOGY

III.1. Types and Sources of Data

In this research, the data used are monthly secondary data of Indonesia which is obtained from *Statistik Ekonomi dan Keuangan Indonesia-Bank Indonesia* (SEKI-BI) Bank Indonesia Syari'ah Banking Statistics (SPS-BI); return syari'ah publication data in Bank Muamalat Indonesia and Bank Syariah Mandiri revenue distribution report; Annual Report of Religious Affairs Zakat Section and Financial Reports from several institutions (Agency of National Zakat; Postal Fairness Caring Ummah; Zakat House Indonesia; BAMUIS BNI; BSM Ummah; BAZDA DKI; BAZDA BOGOR; *Tabung Wakaf Indonesia* ; Paramadina Zakat Foundation; Forum Zakat and *Dompot Dhuafa*) and potential zakat data between January 2001 until December 2007 period.

Referring to the framework (Figure 2.6), then the variables used in this study are:

- a. Demand for Islamic M1 (M1IS), the money supply in the narrow sense of Islam consists of currency and *demand deposits (wadi'ah clearing account)*. In this research, it can not be distinguished between Islamic and conventional money-based because there is a currency element in M1IS.
- b. Demand for Islamic M2 (M2IS), the money supply in Islam in a broader sense consists of M1IS plus *mudharabah* savings and deposits, as before on these variables, it can not be distinguished which more criterias that really fulfill the Islamic conditions because the existence of currency element in M2IS .
- c. Fiat money, either metal or paper money that is in the public (excluding banks) and ready to spend, is issued by the Central Bank at anytime. It still can not be distinguished in this currency elements which fulfill the Syari'ah or conventional conditions.
- d. *Wadi'ah* clearing account (GW), in which deposit contract is done where the receiver is responsible for money value.
- e. *Mudharabah* savings (TM) is the third party savings in Islamic bank in which the withdrawal can be done anytime based on the agreement.
- f. *Mudharabah* investment deposits (DIM) is the third party savings that requires time lag between deposit and withdrawal so the money can circulated
- g. Real *Gross Domestic Product* (GDP), is the GDP that experiences deflation with IHK rate in 2002, but in this GDP research, it still not out of *conspicuous consumption*.
- h. Social values (S), is a social allocation rate and resource distribution. In this research, the data used is zakat data which is estimation data of zakat income, *Badan Amil Zakat Nasional* (BAZNAS) formulation.
- i. *Return Syari'ah* (RS) consists of the Ekuivalen Rate of Mandiri Syari'ah Bank and Indonesia Muamalat Bank.

III.2. Methods Data Processing and Analysis

Vector Autoregression (VAR) will be used to analyze the influence of social values to the demand for money, if the data used is stationary and not co-integrated, or will be combined with error correction models to the *Vector Error Correction Model (VECM)* if the data used are stationary in first difference but there is cointegration. *Impulse response function* analysis was also conducted to see the response of the endogenous variables to shocks of other variables in the model. Decomposition variance analysis was also conducted to see the relative contribution of a variable in explaining the variability of its endogenous variables. All data in this study is transformed into the form of the natural logarithm (ln) except the rate of return. The software used in this study is *Microsoft Excel 2003* and the *Eviews 4.1* program.

Before estimating, the first step to do is stationary test for all variables in order to avoid any *spurious regression*. The test is done on the level and *first difference*.

In a VAR system, determining optimal lag is very important, because it is useful to eliminate any autocorrelation problem in a VAR system. Beside that, determining the optimal *lag* is useful to indicate how long the reaction of a variable against another. Testing the optimal *lag* in this study uses the minimum AIC criteria. Under this test, the lag one will be used for any equation of the next Islamic money demand.

After doing the determinant test of optimal lag, the next step is VAR *stability condition check* which is *roots of characteristics polynomial*. In *Eviews for Users Guide* (2002), Lutkepohl said that a VAR system is stable if all its roots have less than one modulus and is located within its *unit circle*. Linda (2007) also pointed out that unstable VAR system makes the analysis of IRF and FEVD invalid. VAR system test results can be seen in Appendix 1. If all the models in his unit circle or less than one, it indicates that the models are stable.

Cointegration test is conducted to obtain long-term relationship among variables that have met the prerequisites during the integration process in which all the variables have been stationary at the same level of degree one I (1). Cointegration relations in a system of equations in the system indicates that there is *error correction* model describing the consistent short-term dynamics with its long-term relationships as revealed by Verbeek (2000).

Cointegration test in this study uses the Johansen approach by comparing the *trace statistic* with *critical values* that are used, which is 5 per cent. If the trace statistic is greater than the critical value of 5%, then there is cointegration in the equations system. Cointegration test results can be seen in Appendix 2. Through the appendix, it can be seen that there is no cointegration among M1IS, M2IS, UK and GM equation. In TM and DM equation, each of them has minimally one cointegration rank in 5% real level. This information indicates the next

estimation result for TM and DM equation using VECM model. After passing the previous test on the cointegrating VAR system and it was seen that there are four equations that use VAR and two cointegrating equations have then further analysis combined with the VECM model. VECM estimation is carried out to see the long-term and short term analysis, whereas if only it were performed up to VAR, we can see the short-term analysis.

IV. RESULTS AND ANALYSIS

IV.1. VAR Estimation Results of Islamic Money Demand

VAR estimation results for the M1 money demand model of Islam can be seen in Appendix 3. In the short term, it shows that the output or GDP is significantly positively related to Islamic real M1 balance by 1.122078. This means that when GDP increases by one percent, the demand for real M1 balances Islam increased also by 1.122078 percent. So it is in line with the hypothesis whereby when the output increases the transaction costs will rise to be fulfilled, so the demand for money increases. It can be seen in the first period of the year 2001 in which when the GDP amounted to 1198.59 billion with Islamic M1 amounted to 59724.47 billion compared to the first period of 2002, it increased by 1251.53 billion for GDP and 69003.59 billion for Islamic M1.

Social values variables (zakat) on the short term positively significantly affect the demand for Islamic real M1 equilibrium by 2.151359. This means that if *S* increases by one percent, the demand for real M1 balances Islam increases also by 2.151359 percent. So it could happen in the short term, although in the long term it could changed or in accordance with the theory in which with increasing *S*, the people will reduce the demand for money for over-consumption or speculative. Through comparison of the first period of data in 2001 and 2002, when *S* increased from 1685.22 billion to 1710.50 billion, the Islamic M1 also increased from 59724.47 billion up to 69003.59 billion

This variables is positive for Syari'ah return variable. Where if the Syari'ah return increased by one percent, the demand for real M1 balances of Islam would increase by 0.015241 percent. This could happen in the short term because when Syari'ah return is rising, the public can have a view to taking the money, for instance consumption. However, the demand for real Islamic M1. \hat{S} Syari'ah return does not influence significantly. In this case we compare the first periods in 2001 and 2002, in which at the time, Syari'ah return increased by 11.81 percent, the increase also occurred on the Islamic M1 in the same period.

Based on Appendix 4, for the M2 money demand, estimation results show that the output or GDP is significantly positively related to real M2 balance amounted to 1.032118

Islam. This means that when GDP increases by one percent, the demand for real Islamic M2 balances increased by 1.032118 per cent. This fits well with the previous hypothesis. It can be seen in the comparison of data in 2002 and 2003 in the first period, where GDP increased from 1251.53 billion to 1286.89 billion, Islamic M2 from 70575.74 billion to 79020.61 billion.

Social variables values (zakat) on this term is significant and influence the Islamic real M2 demand balance positively by 2.023231. This means that if *S* increases by one percent, the demand for Islamic real M2 balances increased by 2.023231 per cent. This can happen in the short term, because when one gives zakat, it does raise the aggregate demand for mustahik. Zakat's nature makes money owner more prosperous, then the assumption is they will think for investment. With this investment it will also move the aggregate supply, this causes the quantity of goods and services increases. When GDP increases, it makes the level of *muzakki* welfare increased as well.

Meanwhile for *Syari'ah* return variable, this variable is positive by 0.014216. Where if the *Syari'ah* return increased by one percent, the demand for Islamic real M2 balance increased by 0.014216 percent. This is normal in the short term, because when *Syari'ah* return increases, it indicates the profit-sharing increase as well thus in short-term withdrawal of funds can occur for other activities or re-investing the money. However, *Syari'ah* did not significantly influence the choice of someone to hold cash.

IV.3. VAR Estimation Result of Demand for Fiat Money (UK).

For GDP variables, the estimation result shows that these variables positively significantly relates to real UK equilibrium by 1.112937. It means when GDP increases by one percent, the demand for real UK balance will increase by 1.112937 percent. We can take one example occurring in 2001 and 2002, where GDP increased from 1198.59 billion to 1251.53 billion and at the same time, UK increased from 59540.00 billion to 68762.00 billion.

Social values variable (zakat) on short-term influences the demand for real UK equilibrium positively by 2.186456. It means if *S* increases by one percent, the demand for real UK equilibrium will increase by 2.186456 percent, but it doesn't significantly affect the currency. At the same previous period, *S* increased from 1685.22 billion to 1710.50 billion.

Meanwhile for *Syari'ah* return variable, It is significant and has positive value by 0.014752. Where if *Syari'ah* return increases by one percent, the demand for real UK equilibrium increases by 0.014752 percent as well, it can be seen in appendix 5. If we take an example occurring in the first period of 2005, when *Syari'ah* return is 9.59% the amount of UK is 59540 billion, then in the first period of 2006, when *Syari'ah* return 13.23 %, the amount of UK is.....?

IV.4. VAR Estimation Result of Wadi'ah Celaring Account (GW).

According to appendix 6, the output or GDP positively significantly relates to the real GW equilibrium in short-term by 0.198811. It means when GDP increases one percent, the demand for real GW equilibrium increases 0.198811. We can see in 2006 and 2007 where GW followed the GDP movement increasing from 1473.12 billion to 1625.39 billion and GW increased from 2056.76 billion to 3277.23 billion.

Social calues variable (zakat) in short-term negatively affect the demand for real GW equilibrium by -0.232958. It means that if S increases one percent, the demand for real GW equilibrium decrease by -0.232958 percent. Social values doesn't significantly affect the real GDP. It can be seen in 2001 where S increased from 1685.22 billion to 1687.32 billion, GW decreased from 184.7 billion to 171.63 billion.

Meanwhile for Syari'ah return variable, it is negative by -0.582130 and not significant. Where if Syari'ah return increases one percent, the demand for real GW equilibrium decrease by -0.582130 percent. It can be seen in 2004, where Syari'ah return decreased from 8.74 percent to 7.77 percent, GW increased from 664.62 billion to 667.7 billion. In this case, we can see that people still consider the opportunity cost in holding money, it could happen because the money owner can see the *nisbah* fluctuation.

IV.5. VECM Estimation Result of Mudharabah Savings

In the long-term, output or GDP has a negative impact on *Mudharabah* savings with coefficient of -1.908627 and is statistically significant. It means when GDP increases one percent, the demand for real Mudharabah savings balance decreases by 1.908627 percent. It can be seen from the first and the second period of 2001, where GDP decreased from 1198.59 billion to 1187.62 billion, Mudharabah savings increased from 367.55 billion to 403.58 billion.

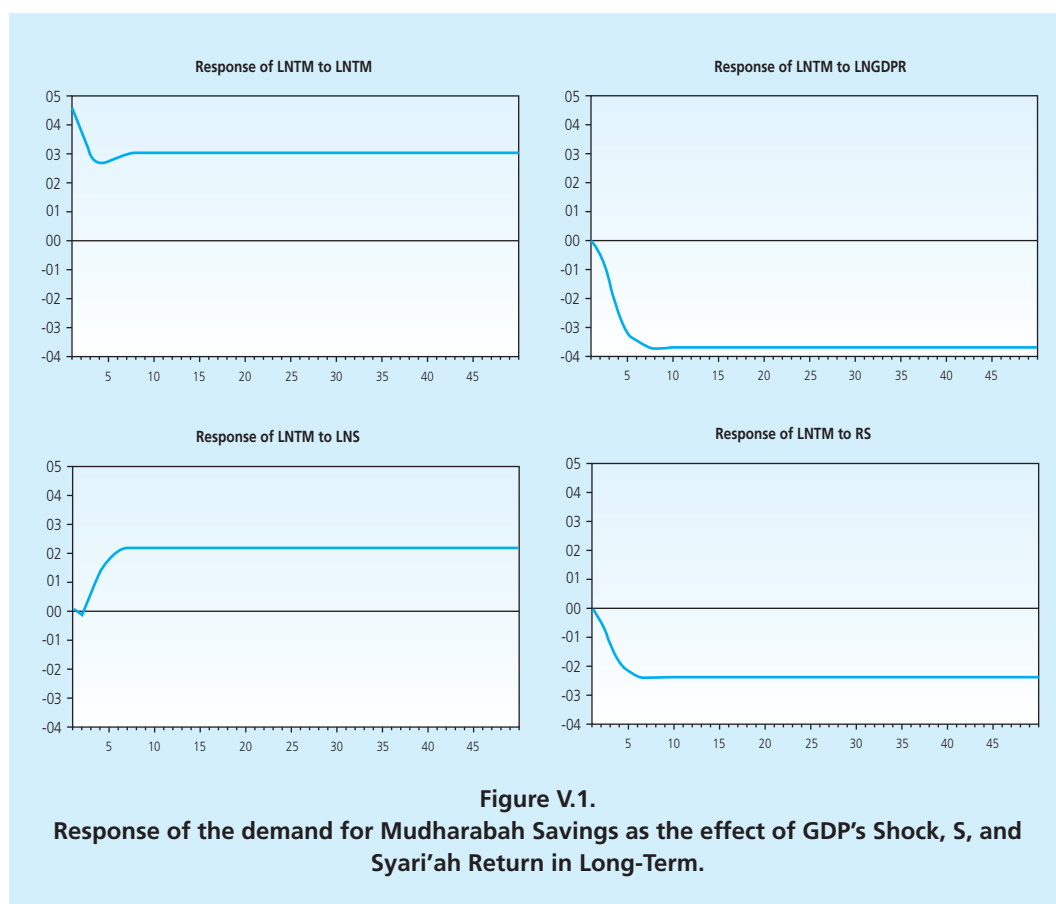
Social values variable (zakat) is significant and positively affect the demand for real Mudharabah savings by 2.198949 in the long-term. It means if S increases by one percent, the demand for real Mudharabah savings balance increases 2.198949 as well. At the same time, S increasing from 1685.22 billion to 1687.32 billion is followed by the increase of Mudharabah savings as mentioned above.

Meanwhile for Syari'ah return, it is significant and negative by 0.057216. Where if Syari'ah return increases one percent, the demand for real Mudharabah savings balance decreases by -0.057216 percent. It can be seen from the forth and the fifth period of the same year, when Syari'ah return decreased from 12.11 percent to 10.83 percent, Mudharabah savings increased

from 430.43 billion to 475.12 billion. Thus it is in accordance with the previous hypothesis focusing on the opportunity cost. It can also be seen that there is an adjustment between short-term to long-term transition because the statistic estimation result is significant. It can be seen in the Appendix 7.

IV.5.1. Response Impuls of The Demand for *Mudharabah* savings

In figure V.1. below, it can be seen that the GDP shock make the demand for mudharabah savings response is negative. It decreased at the first until the fifth period, then at the tenth period, the demand for mudharabah saving started to be stable against the GDP shock influence by 0.39 percent until the end of observation. While for social value variable which is in this case is zakat, S shock makes the *mudharabah* savings positive, even in first period until the level of giving negative respons by 0.02 percent. At the fourth period, Mudharabah savings increased until the seventh period, it started showing the stability by 0.2 %.

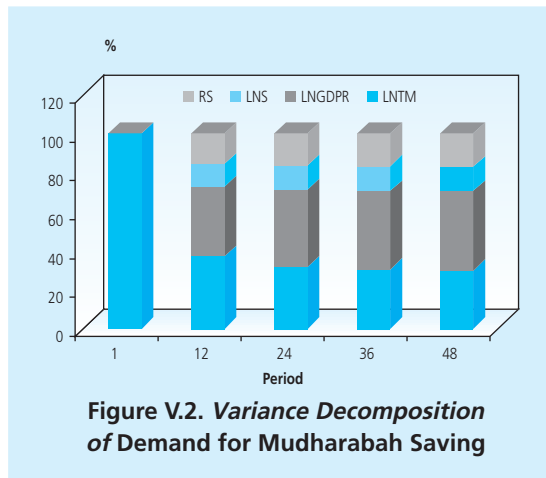


Meanwhile, for the shock given by Syari'ah return variable, Mudharabah savings had negatively responded it since the first period. It decreased from the first until the seventh period and was stable again at the tenth period by 0.25%.

The result of response impuls on *Mudharabah* savings can explain in detail from the previous reseacrh result (Hasanah, 2007) concerning to demand for Islamic M2, where in the research based on IRF demand for Islamic M2 is stable in responding other variable innovation and the result from ECT is statically significant as seen from the adjustment mechanism from the short-term to the long term.

IV.5.2 Decomposition Variance of the Demand for Mudharabah Savings

FEVD result of the demand for mudharabah savings can be seen from figure 4.2. Through the figure, we can see that at the first period, the fluctuation of the demang variable for mudharabah savings is influenced by the shock of Syari'ah savings itself by 100 percent and other variables are not influential. On the next periods, the influence of Mudharabah savings decreased in influencing the fluctuation of Mudharabah savings demand. Started at the next period, GDPR variable started giving dominant variable on the fluctuation of demand for *mudharabah* savings.



At the 12th period, Mudharabah savings can be explain by GDPR variables by 36.08 percent even mudharabah savings itself influences by 36.96 percent. Then, at the 24th until 48th GDPR influence is more dominant by 39.29 percent, 40.22 percent, and 40.66 percent. Social values variable in each period gives influence on the fluctuation of the demand for

Mudharabah savings about 11.38 percent until 12.97%. Syari'ah return variable also gives contribution to mudharabah savings fluctuation started from the 1st until the 48th period about 15.57 percent until 16.74 percent. It can be concluded that in long-term, GDPR has an influence on the demand for mudharabah savings, while social values isn't so influential. It can also be seen from the research done by Chapra (1996) that S can't be explain its influence, because Md is not free from *conspicuous consumption* yet.

IV.6. VECM Estimation Result of Demand for Mudharabah Deposits.

Social values variable (zakat) is significant in long-term and positively influence the demand of real Mudharabah deposits balance by 2.462457. It means that if S increases by one percent, the demand for real Mudharabah savings balance increases by 2.462457 as well.

(L11) in long-term shows that output or GDP negatively significantly relates to the real Mudharabah deposits balance by -4.205416. It means when GDP increases by one percent, the demand for real Mudharabah deposits balance decreases by 4.205416 percent.

Meanwhile for Syaria'ah return variable, it is not significant and negative. Where if Syari'ah return increases by one percent, the demand for real Mudharabah deposits will decrease by 0.020466 percent. It can also be seen that there is an adjustment between short-term to long-term transition because its the t-statistic of estimation result is significant.

IV.6.1. Response Impiuls of Demand for Mudharabah Deposits

We can see from the table below that the influence of *social values* shock on mudharabah deposits still negatively responses from the first until the second period. We can also see that after that, it starts giving positive influence until the last observation period. *Mudharabah* deposits moves towards stable direction at the sixth period by 0,3 percent.

In GDPR variable, Mudharabah Deposits responding the GDPR's shock decreases until from the first until the fifth period. After decreasing, the signs towards stability comes up after the tenth by 0,6 percent.

When the shock of Syari'ah return variable occurs, the given response by Mudharabah deposits is about zero at the first until the second period and starts to be stable at the fifth period by 0.15 percent. It is the explanation that is more detail from the equation used by Hasanah (2007) showing that Islamic M2 can be stable enough.

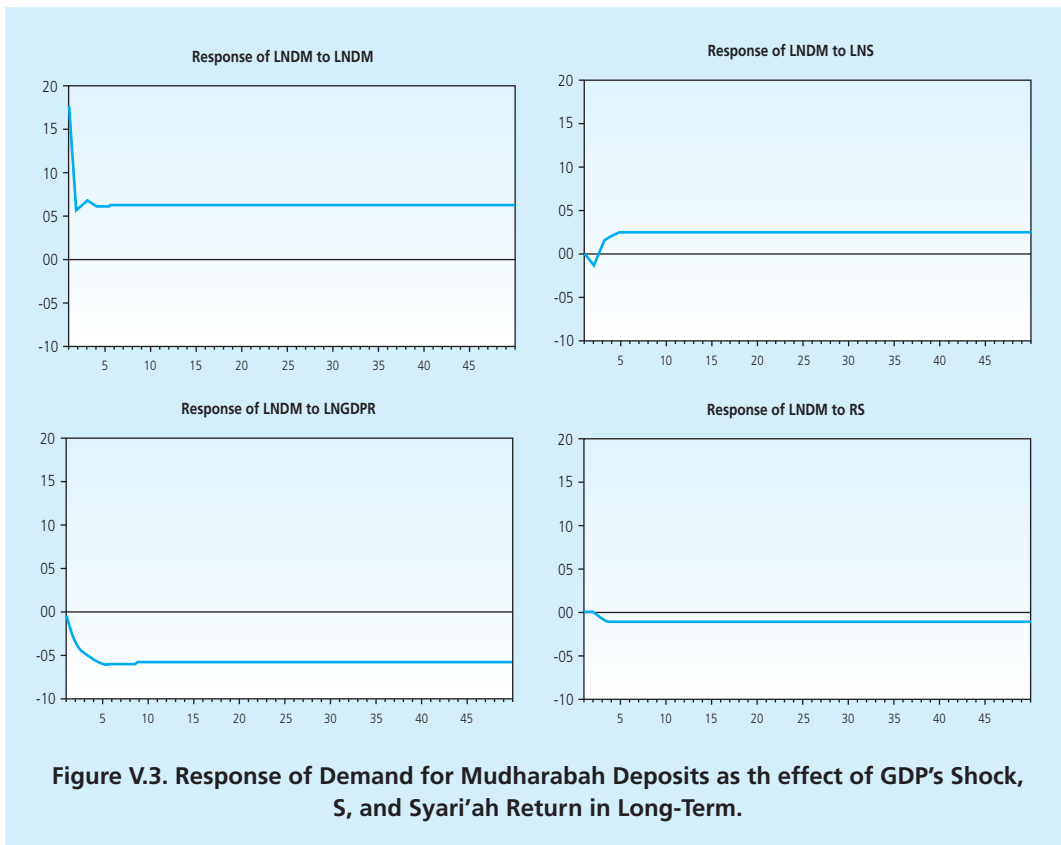
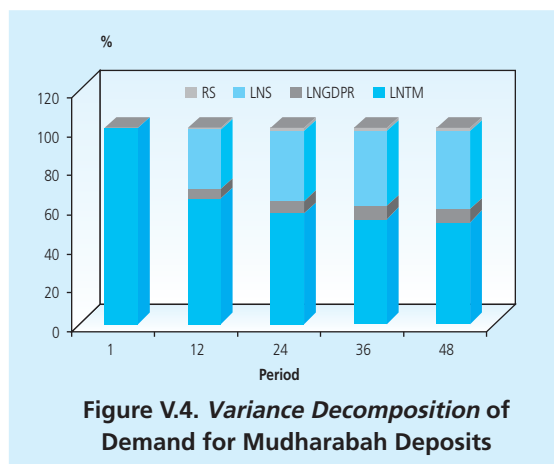


Figure V.3. Response of Demand for Mudharabah Deposits as th effect of GDP's Shock, S, and Syari'ah Return in Long-Term.

IV.6.2. Variance Decomposition of Demand for Mudharabah Deposits.

To see the fluctuation of demand for *mudharabah* deposits, it can be explained through figure 4.4 below. At the first period, Mudharabah deposits variable itself is the most influential on the Mudharabah deposits fluctuation by 100 percent, and Mudharabah itself is still dominant until the last observation period. At the 12th period, Mudharabah deposits fluctuation can be explained by GDPR variable by 30.22 percent followed by *social values* variable by 4.85 percent. On the next period, the influence of GDPR shock increases as well as the social values variable with growth from 1% to 2%. While the Syari'ah return shock just gives contribution from 0.90 to 1.24 percent.

At the 48th period, Mudharabah deposits demand fluctuation is dominantly influenced by itself by 52.21 percent, GDPR by 39.9%. It shows that in the long-term, Mudharabah deposits variable keep dominantly influencing the Mudharabah deposits itself, while Syari'ah return is not very influential.



V. CONCLUSION

Based on the research regarding to the analysis of social values influence towards the money demand in Indonesia, the result is various. Some of them are in line with the first hypothesis, but the rest are not. It is because currency variables that can not be distinguished which is really in accordance with Islamic Syari'ah, money demand should have been free from *conspicuous consumption* and social values that is used is not wholly cover the measureable and the unmeasurable parts yet.

Nevertheless, the result gives the first outline concerning to the behaviour of Islamic money demand towards the influencing variable shock. The obstacles in this empirical test using Umer Chapra money demand model had been predicted before by Umer Chapra regarding to *social values* variables and *conspicuous consumption*.

In general, we can see the long-term relations only in *mudharabah* savings demand model and *mudharabah* deposits. GDP significantly influence each of money demand model (except *wadi'ah* clearing account) because either in syari'ah or conventional system, the money demand will increase if the people are prosperous.

For social values variable and syari'ah return in some models, their influence is opposite from the first hypothesis because the syari'ah system is stii dominated by conventional system. It is because of currency factor, *conspicuous consumption*, and *social values* itself. Syari'ah return that is not significant in some models can be explained by looking at the opportunity cost from holding the money. For this time because of some previous reasons, the influence of *social value* variable doesn't really appear towards the demand for money in Indonesia. The conclusion from general anlysis results is:

1. On the short-term Islamic M1 and M2 demand, GDP positively significantly influences. Social values variable (zakat) is positively significantly influential and syari'ah return is positive and not significantly influential.
2. On the short-term currency demand model, GDP positively significantly relates. While *social values* (zakat) influences the demand for currency balance positively but not significant. Syari'ah return variable is positive and significantly influences the currency.
3. For *Wadi'ah* clearing account, GDP variable has a positive influence, *social values* is negative as well as the *syari'ah* return. However all those variables are not significantly influential.
4. Model of mudharabah savings demand in long-term, GDP negatively significantly relates. While *social values* (zakat) is significant and positively influences the demand for *mudharabah* savings balance. Syari'ah return variable is significant and negative. Based on the result of IRF, the demand for mudharabah savings is stable enough in responding other variables' innovation. There is an adjustment mechanism from the short-term to the long-term and through FEVD result it can be seen that *social values* is not dominant in responding the demand for mudharabah saving.
5. On the model of the demand for mudharabah deposit in long-term, *social values* (zakat) is significant and positively influences the demand for mudharabah savings balance. While GDP negatively significantly relates, syari'ah return variable is negative and not significant. There is an adjustment mechanism from the short-term to the long-term. Based on IRF result, demand for mudharabah deposits is stable enough in responding other variables' innovation and through FEVD result, it can be seen that social values is not dominant in influencing the demand for *mudharabah* savings

Through the result of social values influence analysis towards demand for money in Indonesia, so suggestion that can be given is we need more researches regarding to *social values* especially variables belonging to it. We still need more data input regarding to *social values* to really prove it as the monetary instrument in Islamic monetary system. As the authority for the Islamic banking and economy system, Bank Indonesia is expected to re-consider *social values* variable to be more examined its influence in taking the monetary policy.

For the next research, we suggest to observe the money demand by prolonging the data series; re-decrease the *social values* variable for all social activities with the primary data, distinguish between Islamic and conventional currency and also consumption separate without *conspicuous consumption*. We believe that it will give a better analysis result.

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APPENDIX

Table 1
VAR System Stability Test Results

No.	Model	Modulus Range
1.	LNMI1S	0.417043 - 0.070260
2.	LNMI2IS	0.416193 - 0.082248
3.	LNUK	0.410916 - 0.067792
4.	LNGW	0.554353 - 0.130271
5.	LNTM	0.277161 - 0.068155
6.	LNDM	0.455528 - 0.137169

Table 2
Cointegration Test Results (Optimal Lag=1)

	<i>Trace Statistic</i>				
	H_0	$r = 0$	$r \leq 1$	$r \leq 2$	$r \leq 3$
	H_1	$r \geq 1$	$r \geq 2$	$r \geq 3$	$r \geq 4$
LNMI1S		51.80194	24.36049	12.47034	2.669380
LNMI2IS		52.19621	24.46873	12.61307	2.587696
LNUK		51.66462	24.36053	12.49479	2.740090
LNGW		33.71517	15.75253	4.201820	0.402486
LNTM		63.62918	26.05854	14.25646	2.918710
LNDM		70.85890	27.69989	15.36594	4.228240
5% critical value		62.99	42.44	25.32	12.25

Note : bold indicator that trace statistic > 5% critical value and there is cointegration

Table 3
VAR Estimation Results of M1 Islamic Demand

SHORT TERM		
Variable	Coefficient	T-Statistic
D(LNMI1S(-1))	-0.445146	-4.24137
D(LNGDPR(-1))	1.122078	3.22959
D(LNS(-1))	2.151359	4.09567
D(RS(-1))	0.015241	1.94604
C	0.017000	2.65226

Note : bold indicators that the variable is significant at 5% significance level

Table 4 VAR Estimation Results of M2 Islamic Demand		
SHORT TERM		
Variable	Coefficient	T-Statistic
D(LNM2IS(-1))	-0.445903	-4.22948
D(LNGDPR(-1))	1.032118	3.09416
D(LNS(-1))	2.023231	4.01773
D(RS(-1))	0.014216	1.89670
C	0.018550	3.01926

Note : bold indicators that te variable is significant at 5% significance level

Table 5 VAR Estimation Results of Currency Demand		
SHORT TERM		
Variable	Coefficient	T-Statistic
D(LNUK(-1))	-0.434011	-4.11628
D(LNGDPR(-1))	1.112937	3.16769
D(LNS(-1))	2.186456	1.86620
D(RS(-1))	0.014752	4.12135
C	0.016904	2.61075

Note : bold indicators that te variable is significant at 5% significance level

Table 6 VAR Estimation Results of Wadi'ah Demand Deposit Demand		
SHORT TERM		
Variable	Coefficient	T-Statistic
D(LNGW(-1))	0.029453	-6.18646
D(LNGDPR(-1))	0.198811	0.16927
D(LNS(-1))	-0.232958	-0.11953
D(RS(-1))	-0.582130	1.04078
C	0.044192	1.84506

Note : bold indicators that te variable is significant at 5% significance level

Table 7
Estimation Result of *Mudharabah Savings Demand*

SHORT TERM		
Variable	Coefficient	T-Statistic
CointEq1	-0.333766	-5.23838
D(LNTM(-1))	0.113769	1.13528
D(LNGDPR(-1))	0.415462	1.28691
D(LNS(-1))	0.011711	-1.53806
D(RS(-1))	-0.827572	1.47837
SHORT TERM		
Variable	Coefficient	T-Statistic
LNGDPR(-1)	-1.908627	5.49247
LNS(-1)	2.198949	-3.17298
RS(-1)	-0.057216	4.51625
@TREND(01:01)	0.049968	-10.2711

Note : bold indicators that te variable is significant at 5% significance level

Table 8
Estimation Result of *Mudharabah Time Deposit Demand*

SHORT TERM		
Variable	Coefficient	T-Statistic
CointEq1	-0.589760	-4.26577
D(LNDM(-1))	-0.153518	-1.32523
D(LNS(-1))	-3.013017	-1.34550
D(LNGDPR(-1))	-0.169284	-0.13311
D(ERBMI(-1))	0.010978	0.36062
SHORT TERM		
Variable	Coefficient	T-Statistic
LNS (-1)	2.462457	-2.08780
LNGDPR(-1)	-4.205416	7.18548
RS(-1)	-0.020466	0.94958
@TREND(01:01)	0.067205	-8.11926

Note : bold indicators that te variable is significant at 5% significance level