

Fractional Reserve Banking and Maqasid al-shariah: An incompatible Practice

*Sani. M.D, **Arfah S. ***Meera A.K.M. and ** **Aziuddin A.

* PhD Candidate, Graduate School of Management,
Universiti Putra Malaysia
43400 Serdang, Selangor, Malaysia
Email:sanidangulbi@yahoo.co.uk
H/P 0172732616 or 0103686995

**Department of Accounting & Finance, Graduate School of Management
Universiti Putra Malaysia,
43400 Serdang, Selangor, Malaysia

***Department of Business Administration, Faculty of Economics & Management
IIUM, Gombak, 50728 Kuala Lumpur Malaysia

****Rectorate, Selangor International Islamic Universiti College,
Bandar Seri Putra, 43000 Kajang, Malaysia

Abstract

This paper conceptualises the process, existence and the implications of fractional reserve banking in our present banking system (both conventional and Islamic). It then reasons the conformity of our contemporary Islamic banking, finance and investment institutions towards achieving the objectives of Islamic law (*maqasid al-shariah*) operating under the FRB framework. The paper uses conceptual and logical deductions from Qur'an and *Hadith* to show how fractional reserve banking violates the objectives of *shariah* (*maqasid al-shariah*). Therefore it is impermissible in Islamic perspective. The paper also discusses some scholars' view in support of the system. A measurement tool which is based on the *maqasid al-shariah* parameters will be eventually used to measure empirically the implication of such system (FRB) to the society. The paper concludes with the believe and hope that Islamic banking, finance and investment institutions should avoid the system and operate under a monetary system acceptable in Islam that will help attain the objectives of Islamic law (*maqasid al-shariah*)

Keywords: Fractional Reserve Banking, *Maqasid al-shariah*, Islam, monetary system and finance.

Introduction and Objectives of the Paper

The banking sector occupies a central role in every economy and is a particularly important sector for the stability of financial systems (Hülsmann, 2003). As a result, central bankers and financial supervisors invest a great deal of resources in analyzing how to strengthen the financial system, including the system of financial regulation and supervision, to reduce the frequency and severity of future bouts of financial instability (Hülsmann, 2003). One of the major practices of most commercial banks globally is the fractional reserve banking (Meera & Larbani, 2009). Twentieth century spawned a movement committed to developing an Islamic variant of economics. After the long period of colonial domination of Muslim countries by Western imperialists, the movement for Islamization in all spheres of Muslims lives has started to gain momentum of support and acceptance. These movements started in the Middle East and had influenced neighboring continents to promote what was claimed as a turning back to the actual and complete practice of Islamic way of life (Abozaid and Asyraf, 2007). The economic Islamization campaign had enjoyed at least tacit support of politicians and intellectuals of many Muslim countries like Malaysia, Iran, Pakistan and Sudan (Henry & Wilson, 2004). The movement to Islamize economics had further received a second wind during the Arab oil boom of the 1970s, when Saudi Arabia and other wealthy monarchies of the Arabian Peninsula felt compelled to demonstrate a commitment to Islamic causes (Kuran, 2004).

Consequently, Islamic banking and finance has emerged as one of the fastest growing industries. It has spread to all corners of the globe and received wide acceptance by both Muslim and non-Muslim alike (Iqbal & Molyneux, 2005). Extant literature proclaims that Islamic banking differ significantly from conventional banking, not only in the ways they practice their businesses, but above all the values which guide Islamic banking whole operation and outlook (Abozaid and Asyraf 2007). The values which are prevailed within the ambit of Shariah, are expressed not only

in the minutiae of its transactions but in the breadth of its role in realizing the Maqasid al-Shari`ah (objectives of Shari`ah) (Abozaid and Asyraf, 2007). Indeed, Maqasid al-Shari`ah reflects the holistic view of Islam which has to be looked at as a whole not in parts as Islam is a complete and integrated code of life and its goal encompasses the whole life, individual and society; in this world and the Hereafter (Abozaid and Asyraf, 2007). Hence, a deep understanding of Maqasid al-Shari`ah entails intense commitment of every individuals and organizations to justice, brotherhood and social welfare. This will inevitably lead to a society whereby every member will cooperate with each other rather than compete, as success in life is to obtain the ultimate happiness (*falah*). Thus mere maximization of profits cannot, therefore, be sufficient goal of a Muslim society (Abozaid and Asyraf, 2007).

Maximization of output must be accompanied by efforts directed to ensure spiritual health at the inner core of human consciousness and justice and fair play at all levels of human interaction (*muamalah*). Only development of this kind would be in conformity with the Maqasid al-Shari`ah (Chapra, 2000a).

Fractional reserve banking (FRB) is the term given to the banking system practiced by almost all Islamic Banking and Finance institutions across the world today (Meera & Larbani, 2006). Indeed, it is a simple system that governs the working of the present-day monetary system (Meera & Larbani, 2009). FRB simply means that a commercial bank needs to keep a fraction of the deposits of its customers as reserve, while the rest can be lent out (Arfah, 2010). As simple as it sounds, FRB incredibly exists in all commercial banks and has serious implications for the economy and society (Meera, 2002). More so, the system as practiced by most Islamic banking institutions has some flaws, as it is against the very objective of establishing them; attaining the *maqasid al-shariah*. If these arguments are valid, then this paper has implications for the

operations of the contemporary Islamic Banking, Finance and Investment practices of today. The paper aims at showing that FRB exists in the operations of contemporary Islamic banks which is violates the principles of maqasid al-shariah.

The paper is divided into six sections. The current section discusses the introduction and objectives of the paper. Section two discusses the principles of Maqasid al-shariah in Islam while section three discusses the FRB process and its existence in commercial banks. Section four then argue why FRB violates the Maqasid al-shariah. Section five is on the favorable views of some scholars about FRB. Finally section six gives the conclusion of the paper.

The Principles of Maqasid al-shariah

Al-Maqasid al-Shari'ah, or the Objectives of Islamic Law, is an important and yet somewhat neglected science of the *Shari'ah*. The *Shari'ah* generally is predicated on benefits to the individual and the community, and its laws are designed so as to protect these benefits and to facilitate the improvement and perfection of the conditions of human life on earth (Kamali 2009). The *Qur'an* is expressive of this when it singles out the most important purpose of the Prophet-hood of Muhammad (saw): "*We have not sent you but as a Mercy to the worlds*" (21:107). This can also be seen in the *Qur'an's* characterization of itself as "*a healing to the (spiritual) ailments of the hearts*" and "*a Guidance and Mercy*" for the believers and mankind (10:57). This very important objective of *Rahmah* (Mercy or Compassion), mentioned in these two verses, is further substantiated by other provisions in the *Qur'an* and *Sunnah* (the Traditions of the Prophet) that seek to eliminate prejudice, alleviate hardship and establish justice (Kamali, 2009). The laws of the *Qur'an* and *Sunnah* also seek to promote co-operation and support within the family and the society at large (Kamali, 2009).

The prime objectives of *Maqasid al-shariah* is centralized on the objective of accomplishing the development of both the spiritual and socio-economical well-being of Muslims (Kamal & Yusof 2009). As Kamali (2007) explains that the purpose of the *Shariah* is to benefit and protect mankind as clearly stated in the Quran, Allah tells us that he has not sent the Prophet (saw) except to be “a mercy to the worlds” (alanbiyah,;21:107). Kamali (2009), goes on to explain that *Adl* or Justice is another very important principle and objective of the *Shariah* and its purpose is to create and maintain equilibrium within a society. The author defines Al-Ghazali's classification of the *Maqasid* as being ranked into three; *Daruriyyah* (essential), *Hajjah* (complementary) and the *Tahsiniyyah* (desirable). The *Darurriyah* are divided into 5 which are Life, Intellect, Faith, Lineage and property. Destruction of these items leads to chaos within a society. The Hajjah seek to protect and promote the first category, with the *Hajjat* difficulty and hardship tends to be removed i.e. concessions in *Shariah* such as the shortening of prayer for a traveler. The Tahsiniyyah are refinements in society e.g. the encouragement for the wearing of perfume to the Friday prayer or voluntary *sadaqah*. The *Shariah* also encourages good conduct in mans behavior i.e. *ihsan*, gentleness and pleasant speech.

Kamali is of the view that the used of the *Maqasid* is essential in today's modern context as it is free form juristic problems found in other tools of *Usul fiqh* such as *Ijma*. Hence he feels that *Maqasid* is free from these difficulties and thus are viable options for the development of many issues currently facing the *Ummah*. Furthermore, as quoted by Shidiqi (2004), according to Al-Fasi (1963), “The goal of *shari'ah* is the good (*maslahah*) of human being as vicegerent in the society he lives in, accountable to Allah who made him in charge for establishing justice and fairness, ensuring intellectual and social wellbeing and psychological contentment for every member of the *ummah*.”

While according to Ibn ‘Aashur (1879-1893), “objective of *shari’ah* is meant for maintaining order in the world and preserving its goodness by ensuring the goodness of those who are ruling over in which it indicates reforming (*islah*) in this world and eradicating corruption (*fasad*) from it.”

Justice is important for achieving sustainable economic development because everyone has the same opportunities to contribute the capital for achieving desired outcome. Justice must be carried out with equality for giving out the same opportunities to everyone. Equality is such a check mechanism in order to ensure everyone gets what they deserve as well as avoiding bias and discrimination in term of race, color, age, sex, nationality (Kamal & Yusof, 2009). Chapra (2008), believed that, justice and human brotherhood which encompass equal treatment among individuals are the prerequisite of spiritual needs fulfillment. The fulfillment of justice can bring social and moral uplift in the society in which there is no crime, life security, honors that could bring peace in the society and of course lack of it can cause chaos and confusion in the society.

Finally, Chapra (1992, p7) said ‘the *maqasid al-shariah* is everything that is needed to realize well-being (*falah*), life fulfillment (*hayat tayyibah*) and faith as the most important ingredients for human well-being. It puts human relations on a proper foundation, enabling human being to interact with each other in a balanced and mutually caring manner to help ensure well-being of all. It also provides a moral filter for allocation and distribution of resources in accordance to the dictates of brotherhood and socio-economic justice and a motivating system that brings biting power to the goals of need fulfillment and equitable distribution of income and wealth. Without injecting the dimension of faith into all human decisions.... It may not be possible to realize efficiency and equity in the allocation and distribution of resources, to minimize macroeconomic imbalances and economic instability or to overcome crime, strife, tensions and the other different

symptoms of anomie. Thus, *shariah* removes hardship and thereby facilitates life as well as brings comfort and beauty of life generally. So it is the desire of every society Muslim and non Muslims. The following section explains the fractional reserve banking process, existence and implications.

Fractional Reserve Banking; Process, existence and implications

The Process

FRB is the process through which money is created out of nothing by the commercial banks worldwide. The process of money creation takes two forms; paper notes and coins known as state money and accounting and electronic entries (monies) created by banks as money through FRB (Meera & Larbani, 2009). In latter form, which the focus here, commercial bank simply keeps a fraction of the customers deposit and the rest can be lent out. This fraction is determined by central bank of each country. In Malaysia, the current statutory reserve ratio (SRR) as at March 2009 is 1% of the deposit as set out by Bank Negara. This reserve is what the banks must keep to meet the withdrawal needs of the customers. To illustrate this process, let's assume that a customer, Mr. Muhammad, has an account with a bank say *Nasiha* Bank and deposited one thousand Ringgits (**RM 1000**) today for safe keeping. The bank of course has a lot of customers. And one of the customers, say Mr. Abu Bakar applied for a loan from the same *Nasiha* Bank. The bank by law, set out by bank Negara, on statutory reserve ratio (SRR), can loan out 99 percent of the deposit, so *Nasiha* Bank gave **RM 990** Mr. Abu Bakar who also deposit same to say, *Amanah* bank and *Amanah* bank loans out **RM 980.10** to Mrs. Hawa who deposits to another bank say *Iman* Bank, this continue on an on. From the **RM1000** deposited by Mohammed, much has been created (RM990+Rm980.10) out of thin air by the commercial

banks. So, under this system, an original deposit of RM1, 000 for example, enables the banking sector to increase deposits to maximum amount of RM100, 000, (which is RM1, 000 divided by the reserve requirement of 0.01). This new money creation is achieved through credit creation that is purely an accounting process that does not involve any “real” money. It is important to note here that, when a loan is extended, the borrower is recorded with a double entry, one debit and one credit. The debit denotes him/her as a debtor to the bank for the loan taken, while the credit entry denotes him/her as a depositor, for the amount extended to him/her. These are simply accounting entries that do not involve the movement of any physical currency notes (Meera & Larbani, 2009). When a loan is extended, it does not reduce the deposit of any of the depositors at all, because it is new money created into the economy. As a result of this new money creation, the original RM1, 000 deposits is now equivalent to 1 percent of the current total deposits of RM100, 000, i.e. the required reserve ratio. Therefore, the basic money supply in a nation consists of currencies and coins, normally termed as M0, and credit money which is also called bank money. The total of these two is usually termed as M1. Therefore, central banks use the SRR to control the money supply in their respective economies (Meera & Larbani, 2009).

The above example of Malaysian commercial banks is to use our immediate environment. The truth is that all commercial banks across the globe use the same system (FRB) to create money. The only difference lies in the statutory reserve requirement which differ from one country to another, For example, it is 5 percent in Pakistan and 10 percent in the United State of America. Therefore, the major argument here is that fractional reserve system is a global banking practice in almost all the commercial banks (Ahmed & Larbani 2009, Chung & Liu, 2005). Having seen the process, now the existence of FRB in commercial banks is discussed below.

The Existence

The existence of FRB in the commercial banks of the western and other nations of the world is evident through the supervisory role of the various central banks of these nations (Walter, 2002). Most central banks in most nations provide the reserve ratio for commercial banks to guide their operations (Poon and Boston 2010). The reserve ratio or statutory reserve requirement as is usually called, is defined as the state bank regulation that sets the minimum reserves each bank must hold to customer deposits and notes (Smith,2010). It would normally be in the form of fiat currency stored in a bank vault (vault cash), or with a central bank (Yesin, 2005). As the central bank of every nation is peak institution that regulates and maintain monetary policy of a nation, all central banks make it mandatory that commercial banks must keep a fraction of customers deposit as reserve and loan out the remaining part of the fraction (Smith, 2010). This statutory provision by central banks allows commercial banks to create money through loans, has shown that all banks operate under this system. For example, in United State of America, the reserve ratio is 10%, China 16%, Malaysia 1%, Pakistan5% and Switzerland 2.5% (Poon & Boston, 2010), to mention but a few. On the other hand, the Islamic banks also are regulated by the central banks of their respective countries using the same statutory provision of reserve requirement on commercial banks, thereby operating under fractional reserve system. For example, in Pakistan, the reserve ratio is 5% and 1% in Malaysia as directed by Bank Negara as at 1st March 2009.By this ratio therefore, commercial banks in say Malaysia, must keep only 1% of the customers' deposit and loan out the 99% to other customers who might need the loan. This is a clear indication that even Islamic banks operate under the fractional reserve banking.

As mentioned earlier, this reserve ratio is a requirement by law from central banks on commercials banks (both conventional and Islamic banks) to comply. As all commercial banks

are regulated by central banks of their respective countries (Neol, 2000), and issue this statutory requirement on the commercial banks, one can confidently argue that all commercial banks operate under fractional reserve system.

The Implications

As mentioned earlier, commercial banks create money through fractional reserve system which increases the money supply in the economy thereby causing inflation. As clearly illustrated, Meera & Larbani, (2009) explained the implication of such inflationary phenomenon as ‘Those holding money would have to forego some purchasing power of their money. They can now only claim less real things in the economy. Indeed, the total of the real purchasing power lost by the economy as a whole equals the total value of assets transferred to the businessman/bank. In other words, all subjects in the economy paid for the transfer of wealth through inflation, i.e. through increased price levels’. This occurs because the excess money created did not match the real money in the same economy. To prove this implication Meera & Larbani (2009) computed the growth of real economy measured by the growth of real Gross Domestic Products (GDP) of 32 countries and compared it with money growth in those countries, the result indicated that money growth has exceeded the real economic growth in form inflation which is a hidden tax paid by both rich and poor in those societies. This is quiet immoral as the societal well-being is being jeopardized by few individuals and their families (Bank owners). See appendix A for the computation table adopted from Meera & Larbani (2009).

Another implication is that of moral reasoning. What is moral justification for the commercial banks to loan out the depositors’ hard earned money without consent? Of course the consequence here is that the depositors are cheated because they trusted the banks with their deposits. This resembles some breach of trust.

Another important implication of money created through FRB has to do with debt default. As banks extend loans from the electronic money created, more individuals, firms, governments and organizations become highly indebted to the extent that default becomes inevitable. For example, Meera (2004), has clearly demonstrated this implication as follows: For example, the authors explained, assume that there is a total of RM10 billion money supply in the form of loan given out at an interest of 10 percent. At the end of a period RM11 billion (i.e. RM10 billion plus interest of RM1 billion) need to be repaid. However, only RM10 billion actually exists in the form of money, the RM1 billion interest portion does not exist. If additional money to the amount of RM1 billion is not created and introduced into the system, then some borrowers are bound to default on the loan. So in this scenario, three things may occur in order to sustain the system.

- i. Additional money will be created in the form of loans be given to the defaulting units known as debt rescheduling. This of course will increase the indebtedness of the borrower;
- ii. Government can print additional paper money and coins and introduce in to the economy to the tune of the interest money
- iii. The banks confiscate the real wealth (collaterals and others) from the defaulting borrower.

All the three options are dangerous to the borrowers and society at large. Because the first two cases cause money supply to further growth leading to more inflationary situation while the last one lead to transfer of wealth form the borrower to the bank. This is considered as the final implication explained below.

Finally, another implication for the FRB money creation system concerns the transfer of wealth and sovereignty from the indebted individuals, firms and organizations to the banks as a result of debt default which is inevitably built in the system as explained above. As electronic money continue to increase through loans, aggregate debt of private and government also continue to heighten to the extent that some firms and organization must default after several debt rescheduling. The result is that, the bank will claim their real asset used as collateral from the defaulting firms, making the firms or organizations bankrupt. This wealth transfer leads to unemployment, and other economic problems including financial crisis. Cases of Enron, Xerox, Brazil, Russia and Argentina are some few examples (Meera & Larbani, 2006).

FRB Violation of Maqasid al-shariah

Looking at the objectives of shariah (maqasid al-shariah) and the fractional reserve banking explained earlier, there are several violations of shariah in the present operations of Islamic banks operating under FRB framework. Some of the violations are:

1. One of the major objectives of shariah is to protect the wealth of individual and society at large. This objective suffers under FRB because the rich are getting richer while the poor ones suffer. In FRB when money is created by extending loans, the benefit of the process goes to the few (bank owners) leaving the rest of the people in the society to suffer. This violates the maqasid al-shariah which aimed at well-being of the *ummah*.
2. Under FRB the sovereignty of individuals is lost which another objective of shariah. As wealth accumulates in the hands of the few (Banks) that creates money, peoples' faith, life intellect, and progeny will be affected. This has been clearly supported by one of the tradition of Prophet Muhammad (pbuh), **that poverty, in all probability, lead to unbelief (*kufir*), (Baihaqi and Tabarani).**

3. As shown earlier, Money creation through FRB increases money supply causing members of the society to bear some hidden taxes as a result of inflation causes some hardships especially to the poor. Furthermore, in shariah, wealth transfer is always from rich to the poor but in FRB the opposite happens. This seriously violates the maqasid al-shariah. The circulation and concentration of wealth is highly discouraged as stated by Meera & Larbani, (2009), while quoting the holy Qur'an (**Al-Hashr 59:7**) **In order that it (wealth) may not (merely) make a circuit between the wealthy among u....**
4. As FRB causes transfer of wealth as a result of confiscation of assets, the society run into so many calamities such as robbery, corruption, theft, adultery and many societal anomie. This occurs due to the violation of maqasid al-shariah.
5. Shariah requires justice and fairness among people. This is violated by the FRB as customers' deposits are loaned out to other customers without prior permission or consent from the owner. This is morally wrong and shariah is violated.

Having discussed some of the violations, the following section explains the views of the proponents of FRB.

Proponents' Argument on FRB

Generally, several arguments have been put forward to support of FRB. Some of them are;

1. As FRB increase or decrease money supply, proponents believed that it allows the managing of the international competitiveness of a nation's export wages and salaries can be affected accordingly. The major flaw of this statement is that the increase in exports is usually at the expense of workers, therefore, they ought to have benefited from such increase, but such policies did not allow that. It is another case of violation of shariah.

2. Money supply through FRB stimulates the economy through increased real output. This is true but one may ask benefit from such increase in real output? Of the banks do benefit. The problem with this point is that bank should not benefit from the increase but the workers should benefit because it is their efforts.
3. Lastly, many believed that the money multiplier brought about in FRB increases liquidity in the market. This has been debunked by Meera & Larbani , (2009) explaining that as more money brings about more liquidity in the market, there is no justification for transferring wealth unjustly and indiscriminately among the subjects in the economy. From these views the concluding part of the paper follows.

Conclusion

This theoretical paper looked at the FRB system from the maqasid al-shariah perspective. It argued that FRB is practiced by all commercial banks (Islamic and conventional). It further argued that FRB enables the creation of purchasing power to the hands of a few individuals or groups of individuals out of nothing. Transfer of wealth from the poor to the rich is one of the major occupations of the system. Scholars have concluded that, the system (FRB) as a significant source of socio-economic problems such as unjust distribution of wealth and poverty.

On this basis, it can be deducted that, the creation of money by FRB is not only impermissible (*haram*) but also does not allow the attainment of maqasid al-shariah by our contemporary Islamic Banking, finance and investment institutions. Furthermore, government should not create money out of nothing just in an attempt of taking peoples' assets illegitimately,

As Islamic banking, finance and investment are operating within the framework of FRB today, there are serious indications that they converge to the conventional system within no time as argued by Meera (2004).

Some may argue that the current financial system operating under FRB is efficient, but the price paid by the humanity on such efficiency probably outweighed the benefits gained.

It is difficult to accuse established systems like the FRB, however it is not impossible for such system to collapse due to its inhuman characteristics as it happened to socialism in Russia.

Finally , Muslims should remember that maqasid al-shariah is the most perfect guiding principles for selecting any economic or financial solution that originated from the holy Qur'an and traditions of prophet Muhammad (pbuh).The Qur'an is very clear about this as stated ***“We have not sent you but as a Mercy to the worlds” (21:107). This can also be seen in the Qur'an's characterization of itself as “a healing to the (spiritual) ailments of the hearts” and “a Guidance and Mercy” for the believers and mankind (10:57).***

References

- Abozaid A. & Asyraf W. D. (2007) The Challenges of Realizing *Maqasid al-Shari`ah* in Islamic Banking and Finance *International Conference on Islamic Banking and Finance: 'Research and Development: IIUM Malaysia*
- Beng Soon Chong & Ming-Hua Liu (2008), Islamic Banking; Interest-Free or Interest-Based? *Pacific-Basin Finance Journal* 15 51-83
- Chapra M.U (1992) Islam and Economic Challenges, *The Islamic Foundation UK*.
- Chapra, M. U. (2000a). *The Future of Economics: An Islamic Perspective*. Leicester: The Islamic Foundation.
- Chapra, M. U. (2000b). Why has Islam Prohibited Interest: Rationale behind the Prohibition of Interest. *Review of Islamic Economics*, 9, 5-20.
- Chapra, M. Umar (2008), The Islamic Vision of Development in light of Maqasid Al-Shari`ah, retrieved in www.muchapra.com. p. 3-4.
- David Korten, (2009) *Agenda For A New Economy*, Berret-Koehler
- Edward Chancellor (2007), Ponzi Nation, "Who is Hyman Minsky?", para 6
- George Monbiot, (2004), About Five Sixths of the Way Down, www.monbiot.com
- Henry Ford (n.d), BrainyQuote.com Retrieved April, 26 2010
- Henry, C. M., & Wilson, R. (2004). *The Politics of Islamic Finance*. Edinburgh: Edinburgh University Press.
- Hülsmann J. G. (2003), Has Fractional Reserve Banking Really Pass the Market Test? *Independent Review*, VII, 3 399-422
- Iqbal, M., & Molyneux, P. (2005). *Thirty Years of Islamic Banking: History, Performance and Prospects*. New York: Palgrave Macmillan.
- Kuran, T. (2004). *Islam and Mammon: The Economic Predicaments of Islamism*. New Jersey: Princeton University Press.
- Martin Carbone (2009), Fractional Reserve Banking, media wiki, USA
- Meera, A.K.M. (2002), *The Islamic Gold Dinar*, Pelanduk Publications, Subang Jaya.
- Meera, A.K.M. (2004), *The Theft of Nations*, Pelanduk Publications, Subang Jaya.
- Meera, A.K.M. and Larbani, M. (2006a), "The seigniorage of fiat money and the maqasid al-

- Shari'ah: the unattainableness of the maqasid'', Humanomics, Vol. 22 No. 1, pp. 17-33.
- Meera, A.K.M. and Larbani, M. (2006b), "Seigniorage of fiat money and the maqasid al-Shari'ah: the compatibility of the Gold Dinar with the maqasid'', Humanomics, Vol. 22 No. 2, pp. 84-97.
- Meera A. K.M. & Larbani M. (2009), Ownership Effects of Fractional Reserve System
Homanomics 25 4 101-116
- Michael S. Rozeff (2010), Rothbard on Fractional Reserve Banking, *Independent Review* 14 10 Washington D.C. USA
- Muhammad Hashim Kamali. (2007). *Priciples of Islamic Jurisprudence*. Malaysia: Ilmiah Publishers Sdn Bhd p 395-399.
- Neol Shippey (2000), The Central Bank Role as a Regulator, Courtney Unstic-veitch
- Obrien A.J. (2010), Real World Option to Fractional Reserve Banking, [www2.gcc.edu.org www.boj.org.jm](http://www2.gcc.edu.org/www.boj.org.jm) accessed 26/4/10
- Pinar Yesin (2005), Monetary Macroeconomics, Zurich University press
- Rowbotham, Michael (1998). *The Grip of Death: A Study of Modern Money, Debt Slavery and Destructive Economics*. Jon Carpenter Publishing. ISBN 9781897766408
- Selgin & George (2000), Should We Let Banks Create Money? *Independent Review*, 5, 1, 30-37
- Sherman, Eugene J., (1986) *Gold Investment*, Prentice Hall.
- Shidiqi, Nejatullah (2004), *Riba, Bank Interest, and the Rationale of Prohibition*, Jeddah Saudi Arabia: IRTI p 21.
- Smith S.E. (2010), what is Fractional Reserve Banking, wiseGeek, www.wisegeek.com
Accessed 26/4/10
- Terence Poon & Andrew Boston (2010), Beijing Raises Reserve Requirement, www.wsj.com accessed 26/4/10
- Trace Mayer J.D.(2008), The Great Credit Contraction, Runthegold.com
- Vadillo, Umar I., (1996), *The Return of the Gold Dinar: A Study of Money in Islamic Law*, Madinah Press.
- Walter S.(2002), Functions of Central banks, *EconWPA Cambridge,0201 (006) 20-39*