THE EPISTEMOLOGICAL PERSPECTIVE OF FRACTIONAL RESERVE BANKING SYSTEM AND 100% RESERVE BANKING SYSTEM: WHERE SHOULD ISLAMIC BANKS STAND?

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Abstract

Objectives – this research is aimed to compare those epistemological bases to the mindset of Islamic Bank and try to drive the philosophy in practical operation whether based on the Fractional Reserve Banking Sytem (RBS) or 100% RBS and analyze the challenges in deploying the 100%RBS.
Methods - This research will be conducted based on an extensive literature review.
Results - Based on the epistemological analysis of money and the business cycle as well as the views of Islamic scholars, 100%RBS should be the best for Islamic Bank. There are four types of 100% RBS namely Pure Commodity Money, Sovereign Money, Narrow Banking, and Limited Purpose Banking. To deploy it into the economic system, another philosophical work should be done to choose one of the types and strengthen it so that the theory of 100%RBS can be implemented for the goodness of Islamic Bank.
Conclusion - In Conclusions, Based on the epistemology defined by Islamic Scholars, FractRBS has more *mafsadah* if we compare to the maslahah. Therefore, 100% RBS should be better for the Islamic Bank.

Keywords: Fractional Reserve Banking System, 100% Reserve Banking System, Islamic Banking, Epistemological

Abstrak

Tujuan – Penelitian ini dimaksudkan untuk membandingkan basis epistimologi dan *mindset* perbankan syariah dan mencoba untuk menurunkan filosofi tersebut ke dalam praktis operasional apakah berbasis FractRBS atau 100% RBS, kemudian mengalisa tantangan-tantangan dalam menerapkan 100%RBS.
Metode – Penelitian ini dilaksanakan berdasarkan kajian literatur yang mendalam.
Hasil – Berasarkan analisis epistimologis tentang uang dan siklus bisnis serta pandangan dari cendekiawan Islam, 100%RBS mesti menjadi yang terbaik untuk perbankan syariah. Ada empat tipe dari 100% RBS, yakni Pure Commodity Money, Sovereign Money, Narrow Banking, and Limited Purpose Banking. Untuk menerapkannya ke dalam sistem ekonomi, kerangka filosofi lainnya mesti dilakukan untuk memilih satu tipe dari beberapa tipe di atas dan memperkuatnya supaya teori 100%RBS dapat diterapkan demi kebaikan bank syariah.
Kesimpulan – Disimpulkan bahwa berdasarkan epistimologi yang dijelaskan oleh para cendekiawan Islam, FractRBS memiliki dampak negatif yang lebih banyak dibandingkan manfaatnya. Oleh karena itu, 100% RBS adalah hal yang lebih baik buat bank syariah.

Keywords: Fractional Reserve Banking System, 100% Reserve Banking System, Islamic Banking, Epistemological

1. Introduction

The development of Islamic Banking (later stated as IB) in the modern era is overwhelming. The global financial industry has seen the fast development of IB since decades ago. According to the Ernst and Young Report of Islamic Banking Competitiveness, below is the growth of IB assets as of 2010 to 2014:

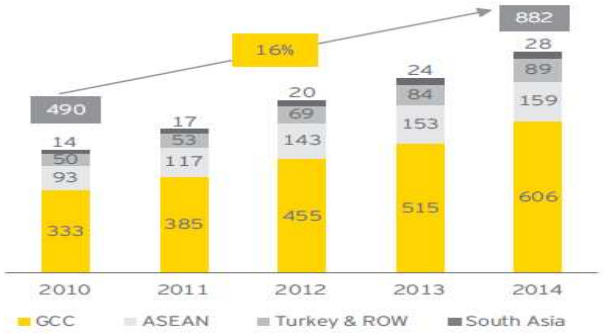

Figure 1 International Participations Banking Asset (US billion)
Source: E & Y World Islamic Banking Competitiveness Report, 2016

Since 2010, the Cumulative Annual Growth Rate (CAGR) of IB assets grew 16% annually from U$ 490 Billion and almost doubled to U$ 882 billion in 2014. GCC led the way by contributing almost 60% of Industry assets (Ernst and Young, 2016). Behind those numbers, the scholars should scrutinize deeper on how the amplification of IB theory. Most of the IBs are operated under the dual banking system. Moreover, It is also known that the growth of IB industry is now benchmarking to its conventional counterpart in all aspects including the liquidity management (Wan Ibrahim & Ismail, 2015). In this context, Both IB and Conventional Banking (later written as CB) use the same mode of liquidity management system which named FractRBS.

In the axiological perspective, the FractRBS is a technique that most banks including IB, used it to manage their liquidity by maintaining cash reserve as low as possible (Hanif, 2011). That means, banks as intermediaries between the surplus unit (depositors) and the deficit unit (debtors) maintain only a fraction of the surplus unit money to be channeled to debtors in optimized manner. For instance, if one bank has a $ 1.000 of liability in form of demand deposit as well as fixed deposit then, the bank only hold a part of it, for example, a $ 100 as a reserve and the rest is extended to debtors as a credit amounted $ 900. For many banks, this means more profit instead of providing safety to its depositors. When the economy is good, FractRBS is the main "money machine" to accumulate the aggregate income. Otherwise, in the recession era; when most of the people think that holding cash in their faults is more comfortable for them, FractRBS will trigger a bank run because the banks somehow are illiquid and only have a

reserve of $ 100 which is not enough to meet the request of a large number of customers to withdraw their fund at the same time since the money is stuck in the credit. On the broadside of the banking business, Both IB and CB which operated in a dual banking system, keep their $100 money to be kept by the central bank in form of statutory reserve. If the statutory reserve determined by the central bank is low, by some economic school, it is “hair on fire” to steer the economic growth of a country since it used to finance the production as well as consumption of society (Werner, 2014, 2016).

On the other hand, there is a concept of 100% RBS which has opposite operational side when compared to the FractRBS. In axiological perspective, this concept drives banks to be conservative in using the depositor fund. For instance, one bank has recorded deposits in form of demand deposit $ 800 and fixed deposit $200. The 100% RBS only applies to guard the demand deposit of $800 on their reserve because it must be available at all times for depositors. The amount of fixed deposit of $200 will be given to the creditors. To some extent, at least the liquidity mismatch that happened in FractRBS can be reduced due to plotting the demand deposit as a mere of saving and separate it from fixed deposit. The fixed deposit fund in this system is an integral part to push the economy forward. This concept may lead to the trade-off that will be faced by banks. This is a choice between providing a safe and sound deposit product for depositors as well as optimizing the depositor's fund to create significant profit for the interest of banks (Allen, 2011).

So, the question now is what system should Islamic Bank operate? This paper will attempt to answer that noble question by scrutinizing the basis thinking or on the other words epistemological basis of FracRB as well as 100% RBS with looking up into the history and the scholar's opinion over the topic. Subsequent to that, this research is aimed to compare those epistemological bases to the mindset of IB and try to drive the philosophy in practical operation whether based on the FractRBS or 100% RBS and analyze the challenges in deploying the 100%RBS.

2. Research Method

This research will be conducted based on an extensive literature review. This paper aims to highlight, explain and discuss the academic treatise of Western scholars as well as Islamic scholars regarding the FractRBS and 100% RBS.

3. Fractional Reserve Banking and 100% Reserve Banking System From Time to Time

The Reserve Banking System has been introduced long ago by the Roman Empire after the death of Emperor Justinian in 565 BC. Those days, 100 % reserve applied and it was the true origin of the modern bank. The bank received the money from depositors who have put their money for a safe keeping purpose. In this case, the orthodox said there was no transfer of ownership of the money happened (Ochaita, 2010).

The history of banking for a human being cannot be separated to the "Goldsmith" banking system that was established in England at 1660 by Restoration of Charles II. The Goldsmith Banking which was practiced in the 17th Century was claimed as the first Financial Revolution. Firstly, people were doing a business transaction using gold. Then, they begun to place their gold with the goldsmith who would store it for free. After receiving it they issue a receipt to the depositors. In next to no time, people were doing their business by Goldsmith receipt. The Goldsmith Company soon realized that those people did not redeem the deposited gold and produced more receipt beyond the value of stored gold. So, they were FractRBS with interest paid on the deposit, loans were furnished and also discounted cheque was available (Quinn, 1997). Basically, they were trying to make short term loans by analyzing the customer behavior who would not all attempt to take out their money at the same time (Mallett, 2011, 2015).

Leap into the mid-eighteenth century until 1930, it was a time of Chettiar Banking System (CBS) that was practiced by the South Indian state society whose at that time being the British State Colony. The CBS has been recorded since decades ago in the book of the history of banking as the first banking system which maintained no reserve in their daily operation. They tried to make maximum profit by lending the money to the real sector as well as placed it in the bank in the system. The CBS offered two products namely fixed deposit and the demand deposit (checking deposit). Both products gave interest which at the end triggered a dispute whether demand deposit checking account should be rendered an interest or not. By paying out interest on the checking account it implies the keeping of FractRBS. The CBS was also made some delay in the redemption of checking deposit. Cheque books were given to the depositor and will be paid usually one day after sight (or after the presentation of the cheque). The CBS paid the cheque in the same day if only marked "urgent". The previous statement is based on this following testimony:

> *"Chettiars are not in the habit of keeping a reserve fund. If cash to pay depositors runs short at any time it is their practice to obtain what is required from another firm…"*

Testimonials above was the embrio of so-called interbank fund placement in the modern era that supports the FractRBS (Nair, 2013).

The practice was going on to a time when United States of America (USA) won their World War II and led the world economy by constituting the Breton Wood Agreement on 1944. The Agreement was designed by John Maynard Keynes of United Kingdom. It governed the rest of the world to use US Dollar as the primary currency of international trade mechanism. Those days, the US committed that every 35 US Dollar printed it would be backed by 1 troy ounce of gold. It was a good start to re-establish the economy which has been destroyed by the world war. However, this system was not long last and from 1973, the US via President Richard Nixon decided to end the agreement by omitting "Dollar Backed Gold System". Again the end of this agreement was the start of FractRBS in the late 19 centuries (Ishaq & Mahjabeen, 2015; Meera & Larbani, 2009) .

4. The Debates over Fractional Reserve Banking System and 100% Reserve Banking System

It was a never ending debate on the matter of FractRBS as well as 100% RBS. First, this paragraph will discuss on the proponents of FractRBS. The FractRBS was promoted as well by Adam Smith. In Adam Smith's view, money is a commodity that will be a benefit to the society in general whereas the bank is the main driver of economic development by substituting the previous medium of exchange which was gold and silver to paper money or fiat money. By substituting it, it created some productivity because the more money supplied by banks to the economy could give value addition from previously dead stock to be more productive for the greater society (Ahiakpor, 1999; Curott, 2016; Wallace, 1988). Besides Adam Smith, John Maynard Keynes on his book of General Theory also stressed the importance of the FractRBS. To support the Keynes theory of boom and bust business cycle it should use FractRBS as the media to expand money supply into the economy so that it will increase the consumption as well as investment (Cochran & Call, 1998, 2000). The proponents of FractRBS always stated that it provide such safety to the banks to meet its obligations whenever customers make some withdrawal and give liquidity benefit to the banks (Carlson, 2013). Moreover, Henry Thornton who was the first economist who introduced "Quantity Theory of Money" which explains the close relationship between quantity money supply, general price level, and purchasing power. The theory simply discussed that when more money supplied into the economic system, it creates more purchasing power that drives up the price level and creates inflation. This concept was based on the bank lending activities to raise profit to be paid to the borrower. By the explanation, it shows that banks should maintain a low level of reserve in their book to get maximum profit of investment based on interest bearing financing activities. This concept also

restated by Milton Friedman in 1959 and used as the basis of monetarist macro policy (Ishaq & Mahjabeen, 2015).

After discussing the proponents of FractRBS, this paragraph will dedicate to explore the contra opinions. An economist from Austrian school argued that the practice that has been done by Banks in a way that they keep low reserves money has led to credit creation without any increment in the saving side. The practice is opposite to the definition of deposit *"the depositor's deposit goods with the depositary because they wish for the depositary to safeguard the goods while retaining at all time the availability of their use"* as well as the definition of a loan "*the borrower relinquishing the availability of good of their use".* Thus it is counted as risky manner since bank might delay the withdrawal that is done by depositors as well as the process of the loan drawdown by the creditor. Thus it creates some necessity to the Central Bank to give "Lender of Last Resort" due to all demand deposit are being invested mostly in credit to save guard the depositors interest (Bagus & Howden, 2009, 2010, 2011). FractRBS is fraudulent, unethical and could destruct the economy (Barnett II & Block, 2009).

On the other hand, another economist opined that it cannot be considered as a fraud but it is a risky way to manage liquidity since by nature depositors in only put their money in the bank for safe keeping purpose (Nair, 2015). Moreover, FractRBS is classified as economic parasitism (Nuri, 2002). It is also denoted that the FractRBS is the root of East Asian Financial Crisis (Radelet & Sachs, 2000). FractRBS caused a liquidity mismatch that triggered a chain reaction like a bank run. Likewise, FractRBS which began under Goldsmiths will be led to the fragility of the banking system because the short term demandable deposit is used to finance long-term illiquid financing (Rochet, 2003). FractRBS will be smoothly operated whenever bank can cover the daily withdrawal of demand deposit. Furthermore, the modern FractRBS is more than shell game or is known also as Ponzi Scheme[1] whereas by keeping the lowest reserve in Bank's fault or in central Banking, they pay the old depositors with the fresh fund from the new depositors. FractRBS is like bridge builder. The bridge builder does not calculate the total population of people that are in the particular area; they only estimate how many people will pass the bridge in a day (Rothbard, 2008).

Move on to the debates of *100% RBS*, this system is actually an alternative of the negative impact of FractRBS. The proponents of *100% RBS* are led by the Austrian School of Economics as well as Noble Prize Laureate named Friedrich A Hayek, Milton Friedman, James Tobin,

[1] Is a system that is invented by Charles Ponzi on 1920. He was charged prison because of introducing this method because it is like a pyramid scheme where the fund from a new investor is used to service the investment that is made by the old investor.

Maurice Allais, and the Chicago School of Economics who are fed up by the negative impact of *FractRBS*. The founder of Austrian School of Economics[2], Ludwig von Mises stressed the importance of *100% RBS* due to the role of the bank as the issuer of fiduciary media (issuer of fiat money) in form of bank deposit. He stated that the banks should back the fiat money with metallic commodity or it might use gold as the backing of fiat money. Should it implemented in the banking industry, it might help to control inflation (De Soto, 2006, p. 718). Mises idea was scrutinized by his brilliant follower named FA. Hayek. Hayek wrote an article of 100% RBS and asserted that the banking system had to combine the fiat money and gold and keep a 100%RBS against all their demand deposit obligations (De Soto, 2006, p. 725). Another Austrian School economist; Murray Rothboard with his article titled "The Case for a 100-Percent Gold Dollar". In the article, He criticized the *FractRBS* since it creates boom-bust. On the other hand, he said that the 100% RBS would result in not only economic stability it reduces the legal risk that is occurred by implementing the *FractRBS* whenever bankers making a profit on someone else's asset (De Soto, 2006, p. 727). Besides the Austrian School Economist, the European Economist Maurice Allais of France who won Noble Prize 1988 also supported the *100% RBS* by stating that *FractRBS* is inflaming the economic crisis. He promoted the anti-view of Austrian School of Austrian Business Cycle to replace the boom-bust Cycle that was initiated by the proponents of *FractRBS*. In his proposal, he strained out that *100% RBS* might help the government to reduce the credit expansion as well as controlling the money supply. He also quoted the Chicago School of economic who promoted *100% RBS* as well (De Soto, 2006, p. 730). Last, there was a proposal from Chicago School of Economics in 1935 by making an article titled the Chicago Plan of Banking Reform. Henry Simmons as the leader of this school of thought pointed out that 100% RBS was not only a macroeconomic policy but also as the tools for government in controlling the quantity of money. He added that the deposit that is submitted to banks is a mere of warehouse deposit only for purpose of fiduciary that implies bank to keep the money away to be exploited in form of credit. This proposal, later on, were taken up by Irving Fisher and Milton Friedman. As Freidman idea of 100% RBS, he added up some interest that should be paid to the depositor (De Soto, 2006, pp. 731–735).

On the other hand, there is a group of an economist who is having a different opinion on the goodness of 100% RBS. They criticized the fundamental hypothesis that is used to establish the concept of 100% RBS. They stated that 100% RBS is such a radical way to avert the financial turmoil. They argued on the basis of the proponent's economist of 100% RBS which stated that it can control the money supply as well as the credit expansion. They asserted the three bases of

it which are the role of money as well as the linkage within the credit money supply and the economy. They discussed on the epistemological perspective of 100% RBS. The 100% RBS would not be work successfully even the money supply controlled smoothly. It is because the economic agent has a purpose of holding money as a mere of precautionary. By that, they mean that the 100% RBS will not work well whenever the economy is in recess because all demand deposits are secured and on the other hand the credit would not expand because of the act of holding cash money (Dow, Johnsen, & Montagnoli, 2015). To prevent the bank from keeping such excess reserves, some economist prefers to charge tax so that the credit can be channelled properly (Keister & Mcandrews, 2009). The Banking School is also criticizing the concept of 100% RBS. It is because neglecting the control of central banks as well as authorities on the economy. They emphasize clearly on the causation of money and the real economy via credit creation function that exists in FractRBS (Goodhart & Jensen, 2015). Finally, most of the economist who rejected the 100% RBS have the main concern on the disability of 100% RBS to make some near monies or in the other words financial innovation. Those haters of 100% RBS also highlight on the status of money that is a mere of easing the transaction and not as a commodity. 100% RBS is not the sole solution to recent financial instability. The major changes to implement the 100% RBS are to omit the interest bearing banking product (Van Dixhorn, 2013). The last comment likely supports the Islamic way of ethical economic which mainly prohibits interest because tantamount of *Riba*.

5. Epistemological Perspective of Fractional Reserve Banking Full Reserve Banking: Where Should Islamic Banking Stand?

Based on the historical perspectives as well as the debate over FractRBS and 100% RBS, we can draw some epistemological concept that has been discussed below:

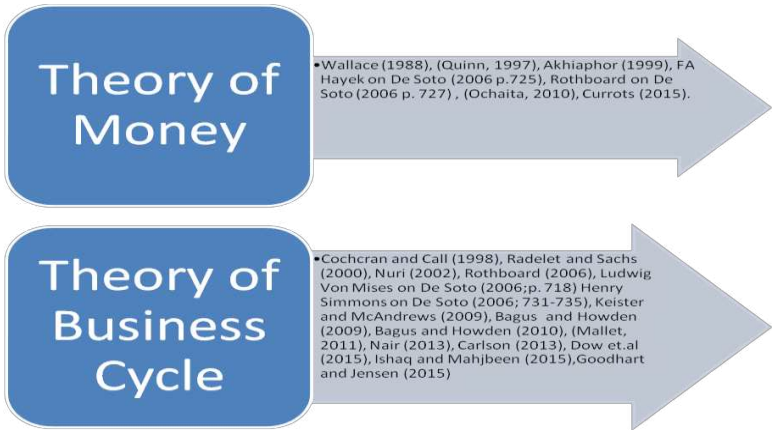

Figure 2 Summary of Reference of Historical & Debates on the Epistemological FractRBS and 100% RBS
Source: Author

Based on above table this paper will discuss more on the theory of money as well as business cycle before drawing a conclusion in which system Islamic Bank should be used in the future.

5.1. The Theory Of Money

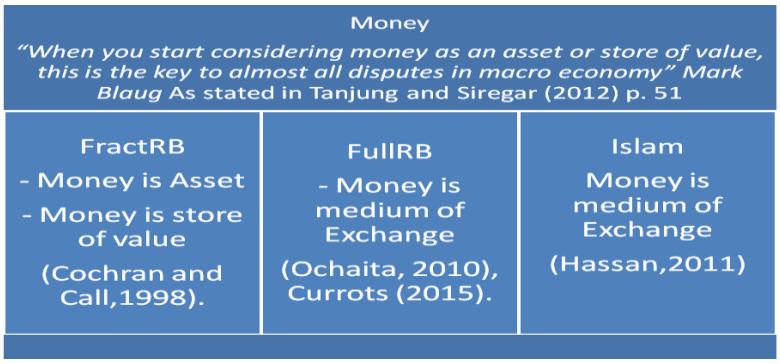

Figure 3 The Theory of Money in FractRBS, 100% RBS and Islam

In general, money cannot be used except there is a social contract agreed upon by all members of a society. Before modern money is widely used, long ago most of the human used the barter system. This system was not long lasting because has the limitation on the scope of exchange and production. Mean that those who can't produce the goods would not participate in the barter system (Hasan, 2011; Rothbard, 2008, p. 4). In this case, money comes as a solution to replace barter system and overcoming the huge difficulties (Rothbard, 2008, p. 5).

Before going so far to discuss the concept of money in FractRBS and 100% RBS, let see below phrase that was said by Mark Blaug[3] :

> *"When you start considering money as an asset or store of value, this is the key to almost all disputes in macro economy"* (Tanjung & Siregar, 2012, p. 51)

Above phrase by Mark Blaug means much to this discussion section. FractRBS and 100% RBS have been set up on the different basis. As per section 4.0 of debate in FractRBS and 100% RBS, we are aware that Keynes as the supporter of FractRBS. We have to scrutinize deeper what Keynes suggest on the status of money not only as a medium of exchange but also more important as a store of value or on the other hand as a commodity. In this case, due to the status of money in FractRBS is not neutral, banks including Islamic Banks can use all deposit either demand deposit or fixed deposit for credit/financing by maintaining low reserves in the central bank (Cochran & Call, 1998). Because of the non-neutrality of money, as per said in section 3, The CBS offered interest to the demand deposit account holders.

On the other hand, the 100% RBS has instituted on the basis that money is only as a medium of exchange. So, the demand deposit which puts at bank account is more like warehouse receipt. By that, I mean that the money which is deposited under demand deposit cannot be channeled into financing credit (Cochran & Call, 1998). This principle was used long ago in the Roman Empire age who was introduced 100% RBS to the society. In this perspective, the neutrality of money in Islam is almost the same with the 100% RBS principle. Islam protects the money to neutral in every time by introducing the concept of Riba (Hasan, 2011). Islam also treats money as "actual capital" instead of "potential capital". When money becomes "potential capital" it refers to what has been done in FractRBS whereas the money in demand deposit is used to fund a project or to make more profit for the benefit of Bank. Otherwise, the "actual capital" is akin to 100% RBS since the demand deposit will be idle and available at any time to serve the need of the depositors. In Islam, money is basically "actual capital" a mere of supporting a transaction. If one desire to generate more wealth with his money, they have to invest in a business/project/trading so that they bare a risk and get the lawful profit (Iqbal & Mirakhor, 2013, p. 4).

5.2. The Concept of Business Cycle

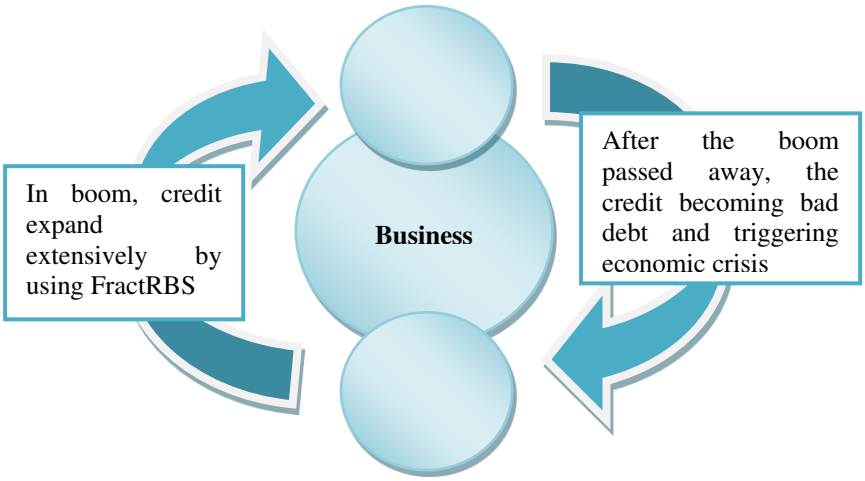

Figure 4 The Business Cycle
Source: (Bagus, 2012; Bagus & Howden, 2009; Cochran & Call, 2000; De Soto, 2006; Macovei, 2015; Rothbard, 2008, p. 98)

Basically, business cycle illustrates periodic boom and busts which are occurred in the economy. It is useful for describing and explaining observable fluctuations in macroeconomics variable (Tanjung & Siregar, 2012, p. 211). In the context of this paper, the FractRBS business cycle is based on the non-neutrality of money. For example, as per explained in the previous paragraph on the CBS, yes they absorbed the big amount of deposit from the depositors.

Afterward, instead of keeping the deposited money as safekeeping, they began to finance selected project to take some profit from it. In this case, unlike the Roman Empire Banking system in the era Justinian, the CBS channeled almost all fund to creditors. In the beginning, we said the business cycle is close to boom and bust which Keynes and other supporters of FractRBS. It means that, when CBS supplied more money into the system via credit, it drove up the borrowing for capital and at the end stimulates the economic activity. Whenever a project was started, it needs labor and will trigger the growth of income as well as consumption. The weak side of FractRBS is that the money supplied to the system gives the negative impact in terms of escalating the price level. CBS, for instance, has put their money in the investment with interest stated and agreed upfront. There no worries on what CBS did in the booming economy. Moreover, the economic has its cycle. If it is bullish there will follow by bearish. Boom economy will be followed by the bust economy. When money is supplied more and more into the system, this kind of expansion cannot last long if there is no additional capital is injected by the project owner. On the other hand, excessive money supply via FractRBS can increase the price level. The project owner itself has two major obligations; the first obligation to CBS as Creditor and the second obligation to the labor and buying the supply material that should be available at any time. The project owner will use their capital for the interest of paying the debt to CBS. It comprised some negative effect when they decided to do so. The labor not paid by the project owner so that the project itself cannot be continued because no labor can be included since they have no financial resources to finish the project. This kind of condition happens when the boom phase turns out to bust phase. The project owner could not pay its obligations to banks and resulted in some non-performing loan and drove the bank to finish the project by creating more money to be injected into the project or if banks fail to do so, the risk of bankruptcy is ahead. The Austrian Economic School defined above as the malinvestment that is resulted from the imbalance of credit and deposit and excessive credit expansion. In this case, there is no cash that is held by CBS. The 100% RBS is alive for conquering those problems. 100% RBS will deny the malinvestment since the money status is a mere of medium of exchange (Bagus, 2012; Cochran & Call, 2000; De Soto, 2006).

The nucleus of the Austrian Business Cycle is the maturity mismatching between the asset of the bank and its liabilities. The mismatch according to the Austrian school is come out from FractRBS and causing the boom and boost business cycle. So based on those core principles, the idea of 100% RBS is featured to industry practitioners as an alternative to ending the periodic economic crisis. The 100% RBS is based on the theory that money only as a medium of exchange. So that, banks who receive the money, have to be in caution in utilizing it (Bagus & Howden, 2009, 2010; Macovei, 2015).

In Islamic perspective of the business cycle, the profit and loss sharing system might give some solution to make business cycle smoother. The profit and loss, in this case, cannot totally omit the business cycle because business risk might happen and drive the *Mudharabah* – Musyarakah investment underperform. He stated that by doing the both participating contract, it might favorable to bank whenever business risk happens especially in *Mudharabah* contract. The business risk might transfer the financing risk directly to the Shahibul Maal. So, in conclusion, the profit and loss itself is not the sole solution to prevent business cycle it has a function to avoid it from being worst (Bidabad, 2013).

5.3. Where Should Islamic Banking Stand?

So, after discussing the epistemological of FractRBS and 100%RBS, it is time to determine which system that IB should be followed based on the extensive literature review. It is found that most Islamic Scholars are condemning the *FractRBS*. FRB is such an incompatible practice because contravening to Maqasid Sharia since the commercial bank creates money out of nothing (Kameel, Meera, & Larbani, 2006). Thus, Islamic Banking which is now operated in the dual banking system is creating purchasing power out of nothing which brings unjust transfer ownership and tantamount to theft and comprises the elements of riba. By unjust transfer of ownership means when financing is created and the money is supplied to the society, it increase the eagerness of society to buy some goods and as result of it will drive up the price level and at the same time making ownership transfer from the society to capital owners who are in this case possess companies that produce goods for society. It will also increase money supply rooting the society to pay additional tax and promoting inflation as well as causing hardship to the poor and the needy. Moreover, the effect of FractRBS can be seen by calculating the monetary aggregate of selected countries and found that money grew in some countries (Meera & Larbani, 2009). Furthermore, the practice of FractRBS is riba as the deposit can be multiplied in form of credit (Karim, 2010, p. 24). FRB system basically equipped the bank with powerful ability to create the money as well as destroy it. By that, He meant the money multiplier effect which inherent in the FractRBS resulted in an increase in the bank asset in form of credit as well as amplify the NPL (Non Performing Loans) whenever Bank distributes the money to the subprime debtor (Mirakhor, 2009). FractRBS is also said as hilah[4] debt based which led to money supply expansion (Hatta, Dien, & Mohammad, 2014).

After a long discussion of FractRBS and its negative impact and based on the Islamic Scholars opinions, we can sum up that 100% RBS might be better for Islamic Bank. In general, this

[4] Hillah in English can be linked to the word of knavery.

research is aimed to give some helicopter view to the Islamic Banking practitioners whenever the 100% RBS is implemented. The future 100% RBS IB might be as follows (Lainà, 2015) :

1. Pure Commodity Standard; this is the view of Austrian Economist as well as Sir David Ricardo with the basis thinking that money is not an asset, it is a mere of the medium of exchange. Due to that status, the fiat money should be printed by making some commodity back up such as gold).
2. Sovereign Money, this is initiated by the UK non-profit organization "Positive Money". They asserted that loans still can be given to customer only by attracting saving or using own net worth.
3. Chicago Plan, associated with "Old Chicago School" in Chicago University as result of the great depression in the US when President Roosevelt was being the President on 1930. They emphasized that the Deposit Banks and Investment Banks should be separated. The Deposit Banks establish only to support the view of money as a trading media nor store of value. This Deposit Banks still have opportunities to make a profit by giving payment transactions system and charged a fee over it to the customer. Additionally, it is in line with the work of Tobin whose opined that 100% RBS applied only some certain type of deposit such as postal saving or central banks account for general public.
4. Narrow Banking, this concept has been developed to the starting point that Bank's asset limited to "safe" by some standards. This model somehow might not be counted as 100% RBS. This is the work of Kareken, Litan, and Spong. Some western scholars advised some similarities between Narrow Banking that was formulated by Chicago School and Islam. They explore the epistemological status of money in Islam as one of six subject matter of Riba. They argued another epistemological of FractRBS; the business cycle which optimizing the deposit taken from customer to be channeled in the finest manner. They also sum up the boom-bust business cycle which is more favourable to the capital holder (in this case bank), government (whenever money supplied to the system price hiked, and the government revenue of value added tax is increase as well) as well as triggering the enactment another financial institution like deposit insurance which has main objective to secure the depositor interest away from the moral hazard of banks. Furthermore, the major idea of Chicago School is the separation between the role of the bank as a place to save money and intermediaries or on the other words disconnecting the money from credit. Again, this separation rejects the Keynes and other supporters of FractRBS who were stating the close connection of it. This division is close to the ABCT of Austrian School. In Islamic perspective, this division to some extent might drive the role of participation contract named Musharakah and Mudarabah. It leaves the option to the economic agent

either only storing the money in Deposit Banks or tries to move it to Investment Bank to take more risk and generate wealth via real sector project financing. Narrow Banking in this point covers the worries of Austrian School and might prevent the bust cycle subsequent to the boom because the project is merely dependent on the capital instead of the side money resulted from the FractRBS (García, Cibils, & Maino, 2004).

5. Limited Purpose Banking (LPB), some economist like Laurence. J. Kollikof and James Cochrane. The main feature of LPB is banks become unleveraged mutual funds. The bank born no risk. This LPB has been attracting Islamic Scholar to scrutinize it deeper (Smolo & Mirakhor, 2014). The background of that research is the 2008 financial turmoil. In general, they epistemological thinking is based on the neutrality of money which on the other hand represented in the prohibition of taking the return from lending the money. As per the name is Limited Purpose Banking, it makes some implications to funding product that is offered to the customer. Instead of offering the demand deposit based on Wadiah (and sometimes) Mudarabah as well as fixed deposit as the way for the surplus unit to invest in Islamic Bank, they suggested offering funding product that has the same feature of mutual funds. In this context, as normal mutual funds product, the net asset value might fluctuate according to the performance of the financing instrument and Investors who chip in the money to Islamic LPB are aware of the risk which is explained by Islamic LPB in the prospectus. As the LPB form akin to mutual funds, the return of investor share is solely depended on to what contract that offered to them. LPB is different if we compare to ordinary Islamic Bank. While Islamic Bank is kind "one size fit for all" or on the other word is wholesale banking with many products as well as contracts offered to the customer, LPB is such specific bank. In future, if LPB idea will be adopted, we then will see such Mudarabah Bank, Musharakah Bank, Murabaha Bank, or any bank which is established specifically and refer to kind of Islamic contract that they would operate to give satisfying return from financing activities. In term of the business cycle, it would differ according to the contract. The participations based banks who are worked under Musharakah and Mudarabah will give some fluctuation to the investor return. While in the sale based as well as rent based contract of Murabaha and Ijarah, the return will be fixed but again it is according to the performance of Murabaha asset itself.

6. Challenges to Deploy 100% RBS into Islamic Banking System

The arrangement of 100% RBS in the economic system is believed to be a revolution to the financial industry according to the Western as well as Islamic scholars. However, big challenges

are ahead in set up the concept. The barrier of the 100% RBS plan are as follow (García et al., 2004) :

1. If 100% RBS is implemented, it is opposite to the saving motives of the majority of individuals. Most of the people are *Homo Economicus* who have own self-interest to maximize their satisfaction. Epistemologically they try to take some advantage from the money that they are deposited in banks. In this case, the *Homo Economicus* treat money as a store of value as well as an asset that is should have returned at any time they put it in banks. Thus, the human behavior might affect to the scarcity of money in the banking system that might affect also to the business cycle. Or on the other words, the demand for the basic saving product will drop since the saving is just similar to put our goods in the warehouse and at the same time they won't enter to the riskier saving such as fixed deposit or *Mudharabah* deposit and at the end interrupting the business cycle.
2. The government intervention by launching deposit insurance company forces the banks both Islamic and conventional Banks to maximize their deposit taken from society for financing. In this case, deposit insurance is favorable to support boom and bust cycle by giving banks such "self-confidence" to maximize FractRBS as well as increase the chance to push the economy into severe economic condition. Deposit insurance will create such ambiguity to the Islamic Bank in particular if we compare to the application of participations contract of Mudarabah and Musyarakah that is implemented without any guarantees cause such guarantees might hike the debates to the contract and make it similar to the conventional investment which tantamount to Riba
3. The 100% RBS might shift the financing that normally associated with banks to the capital market. This is the challenge for Islamic Banks. To some extent, behind the goodness of 100% RBS in promoting financial stability, it resists bank to expand the credit since the credit depends on the eagerness of customer to invest their money in risky asset and at this position Islamic Bank only mere of selecting the best project before offering it to the customer. So, the project owner will approach the capital market as a source of fund. If this happens, it affects the economy and will disturb the economic cycle because the small enterprises which usually advancing their financing to Islamic Bank is not that reliable to enter the capital market (García et al., 2004). Since the potential financing customer shifted to the capital market, 100%RBS will decrease the power of Islamic Bank to make a profit. (Selgin, 2009)
4. The radical change to 100% RBS might draw attention from the opposing group of banking reforms.

7. Conclusions

In Conclusions, Based on the epistemology defined by Islamic Scholars, FractRBS has more *mafsadah* if we compare to the maslahah. Therefore, 100% RBS should be better for the Islamic Bank. To deploy the 100% RBS to the Islamic Banking System need a big effort and deep studies to achieve a smooth reformation process. The 100% RBS is still a theory that needs to be tested before plug it into the Islamic Banking System. The process of testing the 100%RBS theory is as follow (Furqani & Haneef, 2013) :

1. Identifying the problem; since most of the scholars prefer to employ 100%RBS, the problem will be in choosing which to be used either Pure Commodity Standard, Sovereign Money, Narrow Banking, or Limited Purpose Banking.
2. After choosing one of the possible 100%RBS forms for Islamic Bank, it needs to be formed as a good theory to ensure that 100%RBS fit in theoretical and practical side. It should be appraised so that it is epistemologically good by assessing 100%RBS with the divine revelation (Al-Qur'an and As-Sunnah), the logical side as well as the practical side to explore the factual aspect. This is mandatory to prove that the universal as well practical rules of it in line with Islam.
3. After fitting it with above criteria, a hypotical experiment should be created. The hypothesis is such way should be treated as the preliminary model.
4. The experiment should be conducted to authenticate. It is an effort to link the theory and the practical realities. If there are no obstacles that hamper the 100%RBS, it can be implemented directly. However, if there are obstacles and hinder the 100%RBS, the theory should be reassured again before launching into the financial system.
5. When above methodological processes are accomplished, we should be aware that the Islamic Banking itself is a part of the economic system. The 100%RBS basically will affect the entire financial system since it will slow the business cycle down. Nevertheless, when the time is coming to replace current FractRBS to 100% RBS it is important to prepare the banking infrastructure both for policy maker as well as the industry player. For the policy maker, since it will shift the Islamic Bank from industry driven to customer driven (or the financing solely depends on the customer's instinct to invest their money in the project), then, certain policy has to be imposed to protect the customer interest. On the other hand, for the industry player, they have to be ready because the power to make a profit will be decreased since Islamic Bank cannot use the demand deposit to finance future projects. In this case, Islamic Bank is pushed to do more participations financing via *Mudarabah* as well as *Musharakah* to provide profits. When these contracts applied to make profits and the demand deposit under Wadiah contract is guaranteed 100% for anytime withdrawal, the Islamic Bank may construct

another new business cycle that is better than a boom-bust cycle introduced by Keynes. The new Business Cycle is based on profit loss sharing system that is considered to be fair to the banks as well as to the business partner, and to give more stability to the economy system at large

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