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On the Nature of Modern Money

Asad Zaman[1]

Abstract

The root cause of current massive and increasing inequality is the power of credit creation by banks. This inequality causes tremendous social damage by destroying democracy, and impoverishing the already poor for the benefit of the rich. The paper provides both theoretical and empirical evidence for the many harmful effects of modern Western financial institutions. Current efforts at Islamization of banking have made only modest cosmetic changes, and left the institutional structure in place. Genuine Islamization requires radical and fundamental reforms of the entire institutional structure. One element of this reform is to eliminate credit creation by Banks, and replace it by 100% reserve banking. This would go along with a host of other changes, creating fundamentally different types of institutions in conformity with Islamic teachings and history. A move to an Islamic system of sovereign money, supplemented by accompanying institutions, has the potential to eliminate interest, inflation, insurance, as well as to reduce income inequality and eliminate speculative bubbles and financial crises. Furthermore, an Islamic system would direct money towards productive investments, lead to increased prosperity.

JEL: Codes: E4; E5; P4

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1. Introduction

There exists an astonishingly wide variety of views among modern economists and (secular) scholars on the nature of modern money. Keynesian believe that monetary policy can lift economies out of recessions, while

[1]Ex-Vice Chancellor, PIDE, Islamabad, email: asadzaman@alum.mit.edu

monetarists argue against discretionary monetary policy due to long and variable lags in its effects. Those who believe in the Quantity Theory (and the macroeconomic school of Real Business Cycles) believe that money is a veil and plays no significant role in the real economy. Heterodox economists argue that money is a debt-obligation of the government. Modern Monetary theory or Chartalists have radically different views regarding money. Stephen Zarlenga (2002) provides a historically based argument strongly in opposition to the Chartalists as well as all existing conventional views. A large variety of models for money, such as the overlapping generations model, or the Kiyotaki-Wright model, together with adaptive or rational expectations, provide a variety of possibilities for how money functions in a modern economy. A large amount of research in the area shows that multiple equilibria can exist in such models, leaving conventional economic theories unable to say anything definite about the nature of money. Because of this, the present author has shown (Zaman, August 2014) that even in simplest monetary models, co-ordinated common understandings and agreements about how money works can play an important role in determining the role and function of money within an economy.

Corresponding to this confusion among secular scholars, there is also a wide variety of views among the *Ulema* (scholars of Islamic law) on the nature of money. Prominent among these are views that money is

1. A certificate of debt
2. A new type of commodity or asset.
3. A substitute for gold and silver
4. A new type of measure for value of goods (prices) – an alternative to gold and silver, without being equivalent.

There exist many arguments in favour of and against all of these views[2]. Opinion among the Ulema has converged on the fourth view but not because this is favoured by *Nasoos* (Quran & Sunnah). Rather, each of the alternate views (like the first three) create problems in the modern economic setup.

[2]For an extensive discussion and references, see "Paper Money: Its reality, history, value and legal ruling" by 'Abdullah b. Sulayman b. Mani', Qadi in the Makkah Court and Member of the Council of Senior 'Ulama, Saudi Arabia. 1st ed. 1391/1971, 2nd ed. 1404/1984. Translation, Abridgement and notes by Usama Hasan. Another reference which covers similar ground is "Money and Its Usage: An Analysis in the Light of the Shariah" by MoulanaDr. Asmatullah, translated to English by Omar Javaid.

Money becomes not subject to *Zakat*, not useable for trade, not subject to interest and similar problems which do not seem to be in conformity with the role of money in the modern economy.

Even though the current fatwa on money commands widespread consensus among contemporary *Ulema*, it is based on *Hikmah*–it appears most suitable for modern needs. In this paper our goal is to bring out some aspects of the nature of modern money which have generally not been brought out before the scholars of Islam. These aspects require us to re-think the nature of money, and to construct a genuine Islamic alternative to the current system[3].

2. On the Importance of Money

The importance of the topic can hardly be over-emphasized. Both Zakat and Interest are rulings of central importance regarding money in Islamic Law; compliance with Islamic Law in these respects, as well as certain others to be discussed later, requires a clear understanding of the status of modern fiat money. Among the many aspects which have not been taken into account in arriving at present *fatwas*, the following are especially important:

1. The present monetary system is historically unique; nothing like this has existed in the past history of mankind. This means that Qiyas, or analogic method of reasoning, is likely to fail.
2. The present monetary system is an outcome of conscious design, combined with natural historical accidents and an evolution process. One of the leading experts on monetary systems, Williamson (1977) writes that "The Bretton Woods system was easily the nearest thing to a consciously designed international monetary system that the world has yet experienced." This design achieves certain objectives which favour some parties and harm others.
3. The existing system is not symmetric between countries – the US dollar is now the equivalent of gold, and is used as a reserve currency (replacement for, and equivalent of, gold) all over the world. This means that it can be printed in any quantity, almost without bounds.

[3]Zaman (June 2014) discusses the spirit embodied in western banking, showing that it represents the urge to accumulate and hoard wealth. This is contrary to Islamic spirit of generosity. The present paper is mainly concerned with a different problem; namely, the private creation of money by banks via the process of interest based lending.

Other currencies do not enjoy this privilege. This asymmetric system strongly favours the USA, and leads to the following problems for Muslims:

a. It is possible for the US to exchange paper for real resources throughout the world, like oil, human capital, votes, social and political influence.

b. The Iraq war was almost entirely financed by printing trillions of dollars, an un-imaginably large amount of money. If the whole world did not consent to the use of dollars, the war would have been impossible for the USA to finance. This is called "seigniorage" – a privilege enjoyed by the creators of money.

c. The printing of dollars imposes an inflation taxon the rest of the world, which holds dollars as reserve in their central banks, and for personal and institutional use. Thus USA can earn revenue from the rest of the world effortlessly, under the current system.

4. The tremendous privilege of creation of money enjoyed by the USA permits it to dominate the globe. Mahathir Mohammad suggested that refusal of Middle Eastern countries to accept dollars for oil would be sufficient to cause a collapse of the USA Economy. It has been suggested that a reason for the Iraq war was Saddam Hussein's proposal to create an oil-based currency, which would have had similar effects. Knowing whether or not this is true requires access to confidential top level discussions within US leadership; however, there can be no doubt that the current monetary system is of tremendous value to the USA and therefore it is worth a great deal to the USA to try and preserve this system, and to fight any attempts to change it.

5. One of the reasons for the many confusions about money that currently prevail is that it is very strongly in the interests of the powerful to not let the world learn about the mechanisms which create this power. Learning these mechanisms provides access to methods by which this power can be attacked and destroyed. Nonetheless, recent damage caused to global economy by the financial crisis of 2007-8 has led some to make some interesting disclosures. For example, Ahiakpor (2001), Fontana and Palacio-Vera (2003), and McLeay, Radia and

Thomas (2014) show that the reality of money creation differs from the description in textbooks.

Because of all of these reasons, it is important to learn about the complex current monetary system. Rulings based on Islamic law require such detailed knowledge. In particular, is it worth preserving this system developed by conscious design to help some and hurt others? In this context, Hickel (2013) documents that about 136 billion dollars in foreign aid flows from the rich to the poor countries. At the same time, about 600 billion dollars in interest payments (often financed by additional loans at high interest) flow from the poor countries to the rich. In addition, rich countries acquire about a trillion dollars of capital flight from the poor; this including repatriations of capital by multinationals, as well as Swiss accounts of corrupt rulers. This massive exploitation of the poor by the rich is supported by the current monetary system and could not occur without our agreement to accept this as a permissible system for use within Islamic countries.

3. A Central Problem: Fractional Reserve Banking

The problem that we wish to discuss is quite complex, in parallel with the modern monetary system itself. Therefore, it is useful to start with an analysis of the problem in a simpler context, where the problem actually originated. Before starting the analysis it is important to point out that the focus of our analysis is an area which has been ignored by most *Ulema*. central banks publish two measures of money in the economy, M0 and M1. M0 is the amount of cash in circulation, which is also called narrow money or high powered money or the monetary base. M1 is the monetary base plus the amount of demand deposits at banks. Typically M1 is much higher than M0, often up to ten times. *Ulema* have focussed on the nature and legitimacy (or otherwise) of M0, which is unbacked fiat currency. That is, is it permissible for the government to issue notes promising payment on demand, when there is in fact nothing to be paid, except another note just like the first? However, we do not discuss this issue at all. For the sake of argument, we may take the current fatwa to be correct with regard to M0. Government has the right to issue paper currency, and no problems are created by the "fiat" nature of money – that is, lack of gold backing is not a problem. Our focus is on the issue of the difference between M1 and M0. The demand deposits in banks which are also counted as money by all participants in the economic system are quite different in nature from the cash which is M0. It is the legal status of these demand deposits, which form the major portion of money, which we wish to

discuss. Unfortunately, modern monetary textbooks treat both M0 and M1 as being exactly the same, when in fact these are radically different as we will explain. To differentiate the two, we will call the difference between M1 and M0 as bank-created money, or demand deposits; this is the extra money over and above the high powered money M0 printed by the Central Bank. Because economists have treated the two as the same, Ulema who have learned about the nature of modern money from economists have not considered the issue that these are actually very different. Based on considerations to follow, it seems likely that bank created money would not be permissible under Islamic Law, while fiat currency in the form of notes printed by the government would be permissible. If our arguments are correct, then the entire banking system needs to be radically reformed in order to make it Islamic.

3.1 **Origins of Paper Currency**

The complexity of the modern monetary system makes it worthwhile to study its simple origins, which share important common features. In 16th century Europe, goldsmiths (bankers) would issue paper certificates to depositors for gold deposits. These certificates were also used for trading purposes. Goldsmiths found that a large percentage of gold deposits entrusted to them were sitting idle for long periods of time. In order to make profits, they started lending out these gold deposits at interest, without knowledge or permission of the owner. The mechanism for these loans was the issuance of a certificate to the borrower, exactly like the ones issued to those with gold deposits. This transaction is very similar to the operations of the current system of fractional reserve banking; therefore it is worth considering its status within the framework of the Shariah. Instead of providing a ruling, we merely provide some details about the nature of the transaction:

1. The goldsmith does not actually lend gold; he issues a certificate to the borrower which states that the borrower can obtain gold on demand from the goldsmith. There is an element of fraud in this, since the goldsmith does not actually have enough gold to satisfy all claimants.

2. What is lent is just a promise to pay gold, embodied in a certificate. Interest is charged on the loan, when in fact, nothing substantive has actually been given to the client.

3. If certificates circulate just like gold, then the goldsmith has actually created money, and added to the stock of available money in the

economy. If money creation is a prerogative of the government, then this act violates this privilege.

4. The system is such that the creation of interest-based debt is essential and central to the functioning of the system.

3.2 Modern Banks

Modern banks function just like the goldsmith described above. The only difference is that they use deposits of CASH (M0) instead of gold. For instance, the liquidity ratio required from banks is only 15% in Pakistan, so with deposits worth 1000 PKR, they can make loans (and create money) up to 6,600 PKR. This may surprise the reader who is not familiar with bank operations. How can the bank loan amounts greater than what it has in terms of cash deposits? What would happen if people asked the bank for cash?

First, large depositors typically do not ask for money in terms of cash. Most people do not want to hold large sums of cash, while the banks are well equipped to store the money safely. What can and does happen is that people can transfer large amounts of money from one bank to another as part of transaction with some other party. There are many banks and on the average these transfers balance out – some are transferring money from bank X to Y and Z, while at the same time money is being transferred from Y and Z to X as well. There is an inter-bank clearing agency which does all the calculations at the end of the day and provides the net effect of all transactions on the change in deposits for any bank. This can lead to short run fluctuations where some banks end up with the need to pay other banks more cash than they have on hand. Note that in the long run, the bank is solvent – it will get back the money from the loans, plus interest, and therefore will be able to pay back the depositors. To handle short term lack of liquidity, the bank can borrow from the other banks (when one bank is in deficit, some other must be in surplus). It can also borrow from the central bank. In typical course of affairs these transactions cancel out, with banks borrowing money when they need it, and loaning it when they have a surplus. When there is a loss of confidence in the system as a whole and people start withdrawing money from all banks at the same time, then a banking crisis can occur. In these situations (which occur from time to time) it is the job of the central bank to step in and loan money to banks to ensure that they can make payments, and prevent a panic. In fact, an important role of the banking system is to create confidence that people will be paid – this confidence by itself is enough to stop a panic.

There are three issues to consider here:

1. Is the bank permitted to loan money which it does not have, utilizing the fractional reserve banking system? Banks create demand deposits, which entitle owners to receive money from the bank on demand. Bank cannot meet all demands which it promises to fulfil.
2. Permitting this method leads to the creation of money by private banks. By issuing loans of $1000, they create demand deposits of $1000 which is in addition to the cash deposits of $100, thereby greatly increasing the supply of money in the economy. So question is: Is it permissible for banks to have the power to create money?
3. The banks have incentive to create money – make loans on the basis of their deposits – only because of interest based loans. Islamic banking provides formal/legalistic alternatives to interest, but the basic operation is the same – utilization of depositor's money to make risk free loans.

These are questions for the Ulema to consider. As an economist, what I would like to do here is to study the effects of this banking system in practice, as it has functioned in advanced capitalist countries. I will show that the system is very harmful in many ways. For this reason it is not necessary for us to try to create Islamic banks – what is the point of trying to create an Islamic version of an institution that is not beneficial for the society?

4. Lessons from Experience of Banking in these

We now summarize some of the lessons that the experience of banking in USA reveals very clearly. This is based on the highlights, which are three major banking failures in the USA.

4.1 Three Major Banking Failures

First event: The great depression of 1929 was caused by the collapse and failure of banks, and resulted in prolonged misery for millions of people in the USA and elsewhere. This led to strong regulation of banks, and a period of stability for the banking industry, which lasted about fifty years. This led to prosperity and growth in the USA, but with a reduced role for the banking sector, and less power for the wealthy.

Second event: The Saving and Loan Crisis of the 1980's. The wealthy elites (The military-industrial complex and the multinationals) staged a revolt against regulations on the financial industry. This led to a partial de-regulation of one segment of the banking industry, namely the Savings and Loans (S&L) Associations. In a duplication of the events leading to the great depression, the S&L Industry gambled with the depositor's money, leading to colossal losses of about 124 billion dollars. However, this time the government did not allow the banks to collapse, but bailed them out. The entire cost was borne by the taxpayers, and this was larger than the entire gains from the banking industry over the fifty year period of stability.

Third event: The global financial crisis of 2007-8. Despite bad results, the wealthy had enough political power to continue the process of de-regulation of banks started in the 1980's. Previous regulatory measures were repealed and the banks were given freedom to gamble on derivatives. Attempts to regulate this gambling were defeated in the legislature. This led to money creation and gambling by banks on a scale never before seen in the finance industry. On a planet wide basis, the money in gambles was ten times that of the money in real transactions. The main reason for this massive increase in gambling was that the banks were allowed to gamble with other people's money, and also to create money for the purpose of gambling. Furthermore, insurance existed which made these gambles almost risk free – if the banks and financiers won, they pocketed the gains; if they lost, the insurance would pay for the loss. This fraudulent system eventually collapsed, and led to losses measured in trillions of dollars.

These three were among the biggest, but Barro and Ursúa (2009) enumerate 232 stock market crashes and 100 depressions during the twentieth century. Overall, the historical experience show very clearly that the banking and finance industry has been a source of major harm and damage to society. It also seems that regulation is of crucial importance – well regulated banks can contribute to prosperity; while un-regulated banks lead to crises. This lesson requires deeper examination, which will be done later. In the final analysis, although there have been some benefits, the overall cost to society from the modern banking system has been much higher. See in particular, the presidential address of Zingales (2015) on the topic "Does Finance Benefit Society?" He concludes that while finance does offer some benefits, it can also cause serious harm. We now turn to the root cause of the problems with current institutional structures for finance.

4.2 Effects of Private Money Creation

The modern banking system effectively places control of money creation in the hands of the wealthy. This has a lot of extremely harmful effects, which we now review.

4.2.1 Concentration of Wealth

Money creation by banks occurs when they give loans. The larger the loan, the more money is created. In an efficient system, banks would give loans to projects which had the greatest potential for high productivity. This way, the money would be used to finance useful projects, beneficial to the nation as a whole. This would be especially true for loans given on a Musharka basis, where the bank has a strong vested interest in productive outcomes of the project. However, the current system for loans is collateral based. If a poor person with an excellent project asks for a loan, he will not get it. If a wealthy person asks for a loan for a useless project, he will get it because he has the collateral to guarantee repayment regardless of whether or not the project is successful. This has several important implications for the financial system. The wealthy have almost unlimited access to wealth, since loans are granted to them via money creation by banks. The poor have no access to financial institutions; even for their emergency needs, they rely on the informal sector which charges 100% where banks are charging 10%. This system is already biased towards wealth creation for the already wealthy. However, supporting financial institutions make the effects even worse, as we shall soon see. The extreme concentration of wealth that has occurred in capitalist economies has been extensively documented in many sources. Most recently, the analysis of Piketty (2014) provides a systematic analysis of the tendency towards accumulation of wealth in capitalist economies. Even the IMF, which has been a strong advocate of financial liberalization, has admitted that global financial flows have been destabilizing, and have created crises and inequality, without contributing to growth – see Ostry et al. (2016).

4.2.2 Insurance, Derivatives, Property and Stocks

According to false but dominant economic theories, it is a good idea to provide financing to the already wealthy, because they will invest it in highly productive projects. Their existing wealth shows their ability to successfully generate wealth. In contrast, the poor will utilize money for consumption, instead of adding to productive capacity of the economy. Indeed, additional

arguments are made that helping the poor leads to them become lazy and unwilling to work. This deprives the industrialists of the labour force needed to run factories, and makes the nation poorer as a whole. These theories have been successfully propagated by the wealthy, and are now part of standard textbooks on economics. They have also been implemented in policies which provide tax cuts to the wealthy and balance the budget by reducing support for social welfare programs for the poor. The ground reality of what the wealthy do with their additional wealth is substantially different from the textbook pictures.

We can classify investments into two types: speculative and productive. A productive investment builds factories, creates services, and generally adds to the productive capacity of the economy. A speculative investment in property or stocks is just a gamble that the price of the asset will rise, leading to an increase of wealth, without any change in productive capacity of the economy. Just as economic theory does not differentiate between M0 and M1, so economic theory does not differentiate between gambling and investment. Failure to differentiate is extremely helpful in protecting the interests of the wealthy, and in giving the appearance of truth to theories described in the first paragraph.

Careful research shows that over the past thirty years, the wealthy have gained a tremendous amount of wealth. But this gain has not been due to productive investments. Rather it has been due to speculation and gambling on property and stocks. Of course, such speculation is risky – stocks and property values can go up and down. However, the wealthy have devised clever methods to eliminate these risks. Suppose I provide a large mortgage loan to someone to purchase property; the mortgagor promises to pay the amount in small instalments over thirty years. At the same time I can buy (rather, force the borrower to buy) mortgage insurance; this insurance will make payments if the mortgagor is unable to do so. After the insurance, my investment is risk free. Derivatives perform the same function for stocks. I can buy a stock expecting it to go up. At the same time, I can buy a derivative which covers my losses in case it goes down. Through rather complex and often hidden mechanisms, wealthy investors can gamble on huge sums of money in a virtually risk free fashion. Furthermore, private creation of money by banks provides them with unlimited amounts of money to do so.

4.2.3 Regulation and Ratings

In principle, regulations can control many of the problems described above. If banks evaluate the investments properly, and distinguish between speculative and productive investments, they could guide the economic system towards good outcomes. Similarly, rankings of financial soundness play an important role in permitting investors to differentiate between good and bad institutions. These rankings encourage institutions to maintain sound portfolios and avoid excessive speculation. Similarly, insurance companies should screen mortgagors and provide insurance when the borrower has sound and reliable sources of income, and refuse to provide insurance when the borrower is likely to fail in repaying the loan. All of these safety mechanisms were in operation and functioned fairly well in the Keynesian era. However, these same mechanisms became dysfunctional in the post-Keynesian era, for reasons to be explained. The global financial crisis was caused by both the removal of regulatory laws and mechanisms, and the dramatic failure of the regulations which remained.

As already discussed, the climate was in favour of de-regulation. The Gramm-Leach-Bliley act of 1999 repealed the Glass-Steagall act, and permitted banks to invest in stock markets, and make all kinds of speculative investments. Similarly, the Commodity Futures Modernization Act of 2000 blocked efforts to restrict and regulate the use of derivatives. These de-regulations, plus the availability of insurance, and the purchase of regulatory agencies, led to a wild gambling spree on the part of banks. It did not take long for this to collapse the economy in the global financial crisis of 2007.

4.3 Clever Strategies of the Wealthy

The fabled King Midas could turn anything he touched into gold. The ability of the wealthy to borrow unlimited amounts of money using their wealth as collateral, and the ability of banks to provide them with this money by simply creating it, gives the wealthy the opportunity to manufacture money in ways not available to ordinary people. One of the core principles of an Islamic economy is that earnings should be “Halal”. This typically means that the money earned must be deserved on the basis of producing something of value, or of providing some useful service. However, in the modern economy, the wealthy can earn vast amounts of money without doing anything useful or productive. We give three examples of how the wealthy become much wealthier by the use of financial strategies.

One example is the leveraged buyout used to purchase entire companies. The investor needs only about 10% of the worth of the company he plans to buy. The additional 90% is taken as a loan from the bank, and the assets of the company being bought is used as collateral for the loan. Thus, with a little money and little risk, the already wealthy can use the money to acquire productive assets. After acquiring control, they can get a much greater share of the revenue produced by the company, by reducing the share going to the workers. Indeed, the data show that the number of acquisitions – buyouts of firms – has increased tremendously over the past thirty years. Also the amount of profits of the firm going to the workers has remained fairly constant (not increased, or decreased) while the share going to the owners has increased tremendously.

The second example is that of mortgages. These were once the safest types of loans. The banks made loans to people to buy houses, and repay the loan on instalments. The house itself served as collateral, providing a guarantee of the loan in case the borrower was unable to make instalments. Nonetheless, very careful checks were made in order to ensure the ability of the borrower to make regular payments. However, the scenario changed completed after de-regulation. Almost anybody who applied could get a mortgage and buy a house, with no questions asked about ability to pay. Previously banks used to ask for 20% of the price as down payment. However, in modern times, the borrowers were only asked to pay the first instalment and *also to buy insurance for the mortgage*. In this way, the banks were covered whether or not the borrower was able to pay. When a lot of these guaranteed-to-fail mortgages were issued to borrowers who did not have enough income to make the payments, the insurance industry suffered huge losses. The world's biggest insurance company (AIG) was unable to make the payments to cover all the losses. This insurance was the core which held the entire financial system together. Failure would have caused a collapse of the whole system. Therefore the government stepped in to provide funds needed, and prevented the collapse. Thus, the wealthy made tremendous amounts of money, and did not suffer any loss when the system collapsed.Mian and Sufi (2014) have documented the deliberate provision of credit to those with low credit ratings, and how this led to increased assets of the wealthy, as bankruptcies transferred wealth to the lenders.

The third example is the manipulation of stock prices, and also other asset prices. By pooling wealth and buying a stock (or any other asset) an illusion of increasing prices can be created. This illusion tempts others to buy,

at which point the manipulators can sell their stocks at artificially inflated prices and make huge profits by deceiving others. Similarly, the wealthy can combine to speculate against currencies. If all start to buy up a given currency at a given exchange rate, the exchange rate can increase, leading to vast profits on the earlier purchases. Many central banks do not have enough assets to defend themselves against such speculative attacks. Similarly, in an amazing episode which concluded on Silver Thursday, the Hunt Brothers tried to buy all the silver stocks in the world market. They bought more than 50 billion dollars' worth of silver, and two thirds of the entire world stock, and failed to capture the market only because the US government intervened. This kind of manipulation and insider trading is routine on a smaller scale, and is only possible for the extremely wealthy. See Stewart (1992, Den of Thieves) for detailed documentation of many such episodes.

5. Problems with Private Creation of Money

Before we can discuss solutions to the problems described above, it is necessary to state the problem clearly. The main problem is the creation of money by private banks. This created money is M1-M0, the demand deposits over and above the amount of cash in circulation. Typically, private money creation is ten times more than the creation of money by the government, but it can be much greater than that at certain times. We have discussed the reasons why this private creation of money leads to problems above. Here we summarize the discussion and present some additional facts of importance.

5.1 A Crisis Prone Financial System

Because of the system of lending at interest to those with collateral, the wealthy have almost unlimited sources of finances. With huge amounts of money, they are able to manipulate the government, financial institutions, corporations, and individuals, all to serve as their instruments for making even more money. The financial system is inherently unstable because the wealthy extract more and more money from the productive sector of the economy, without providing any productive services to society. As a result, the productive sector eventually collapses, leading to a crisis. However, the extremely wealthy can protect their wealth even during a crisis, and often make even more profits because of the crisis. Thus they have no incentive to change the system. After the global financial crisis, many efforts have been made to reform the system to prevent such crises in the future. However, all such efforts have been successfully blocked with the result that almost

exactly the same financial system remains in operation. As a result, many analysts have said that another crisis is inevitable, as no changes have been made to prevent it.

Marvin Minsky (1992) has provided a deeper analysis of the failings of the financial system, called the financial fragility hypothesis. This is too complex to explain in detail here, but a rough sketch is as follows. When the economy is expanding, productivity rises, asset prices increase, and stocks appreciate. In such situations, money can earn good returns, and hence there is an incentive for private creation of money. Those who can, borrow money to invest in rising stocks and properties, as the interest they have to pay is lesser than the profits they can make. But this expansion makes the stock and asset prices grow even faster. As the stock prices rise higher and higher, this expansion becomes unsustainable and eventually collapses, leading to a financial crisis. Once the crisis takes place, there is widespread unemployment, prices crash, and losses and bankruptcies occur. In this scenario, there is not much private return to be made on money and the banks create much less money than they would in a normal economy. However this further prolongs the crisis and delays recovery. As per Keynesian ideas, we need to add money to a depressed economy to recover, and we need to reduce money supply in an expansionary economy to prevent inflation. The private creation of money does exactly the opposite.

5.2 Illusions Created To Sustain the System

This system which siphons wealth systematically to the rich needs several types of mechanisms to support it and keep it running. At this time, the top 85 individuals in the world have more wealth than the bottom three billion[4]. Many of them have personal budgets bigger than that of many large and populous African and Asian nations combined. Since the wealthy live in rich countries which are typically democracies, it is important for them to ensure that the real economic mechanisms at work are not apparent to the public. The public must in general support policies that are in fact harmful to 99% and serve the interests of a tiny minority. This support is obtained by many means. Hermann and Chomsky (2008) have documented the control of the media by the wealthy, while Palast (2003) documents how wealth is used manipulate

[4]This was true in 2013, when the paper was written. According to latest statistics by OX-FAM, only 62 people now own half of the global wealth. This show the amazing rapidity with which wealth is accumulating at the top.

politics in "The Best Democracy Money Can buy". In the past, donations to candidates for presidential elections were restricted in many ways, to equalize chances for all, and prevent the buying of candidates. Recently, these restrictions have been removed, in effect legalizing bribery[5]. There are many documented cases of huge funding for candidates by corporations, with return favours by the elected candidates. Research by Gilens and Page (2014) shows that on issues where majority public interest's conflict with those of the elite, the elite prevail in political policy making.

Our concern in this section is the propagation of false economic theories through the medium of education and research. These theories support and advocate favouring the wealthy, and hide the ugly aspects of the mechanisms currently in existence.

5.2.1 Mis-measures of Wealth

The private creation of money, and the risk free gambling mechanisms do not add any productive value to the economy. This was well known to classical economists who differentiated between rents accruing from ownership of capital and investments leading to productive returns. Rents were frowned upon, and proposals to tax them away were prominent. For example, Keynes (2006) proposed that low interest rates would prevent renters from making profits just from capital: "(low interest rates) would mean the euthanasia of the renter and, consequently, the euthanasia of the cumulative oppressive power of the capitalist to exploit the scarcity-value of capital."

The renter class fought back by arguing that they create "wealth". The standard economic measures of wealth treat artificial money created by speculation and inflated stocks as equal to wealth created by the genuine production of goods and services. Conventional economic theory, as taught in textbooks all over the world, does not recognize any difference between financial wealth and real wealth. To understand the difference, it is useful to note that just before the global financial crisis the value of derivatives (all of which are gambles on stock prices) was ten times the value of production on the entire planet. This value was rapidly destroyed as stock prices plunged,

[5]Democracy 21 president Fred Wertheimer, a long-time advocate for election money reforms: "The court re-created the system of legalized bribery today that existed during the Watergate days."

without any change in productive capacities, showing that this financial wealth was an illusion.

The same situation prevails currently. By mis-measuring wealth using financial assets, and by using averages instead of medians, one can paint a rosy picture of the current state of the US economy. $12.9 trillion in new wealth created in the United States in 2013 trumps the $12.3 trillion residents lost during the financial crisis, and the country now has nearly half of the world's ultra-high net-worth individuals, defined as those with assets worth more than $50 million. However, from the perspective of the bottom 90%, the economic situation looks bleak, with homelessness, hunger and unemployment at record levels, and declining incomes and income shares for the majority of the working class and middle class citizens.

5.2.2 Hiding Costs and Inequalities

Recently Nobel Laureates Sen and Stiglitz (2009) have compiled a large list of shortcomings of GDP as a measure of wealth. Importantly, the destruction of environment, and irreversible depletion of the planetary resources, is not counted as a cost, while the profits corporations make from this destruction is counted as a gain. Again this makes it appear that wealth is being created, when in fact it is being destroyed. See Zaman (2014) for an evaluation of the costs and benefits of growth over the past century.

Leading economic textbooks make no mention of contemporary dramatically increasing inequality. Discussions of income distribution are carried out in highly technical and theoretical terms, and treated as peripheral to the main issue of wealth creation. Nobel Laureate Lucas (2003) discouraged exploration of these questions: "Of the tendencies that are harmful to sound economics, the most poisonous is to focus on questions of distribution". Many textbooks explicitly or implicitly advocate the trickle-down theory, which states that as long as wealth accumulated, all will benefit from it. Thus, we need not worry about the concentration of wealth in the hands of the wealthy. Thus an illusion of prosperity and growth is created even now, when in the post crisis USA, homelessness and hunger are at highest levels seen since World War II.

5.2.3 Wrong Descriptions of Creation and Control of Money

Most current economic textbooks flatly deny that banks create money. They all assert that the government creates and controls the money supply. The banking system multiplies the money created by a mechanical process. Banks do not create money. Thus, the central problem we have described above, namely the creation of money by banks is denied. In recent times, the gains going to the super-rich have increased so tremendously that even the very rich have been left behind. As a result, some of the rich and powerful have started to reveal the truths about the current monetary system. One of these recent revelations is by McLeay et. al. (2014) published by the Bank of England. Clearly this is an authoritative source with intimate knowledge of money creation. This report clearly states that the reality of how money is created by private banks is entirely different from what is written in most textbooks. It describes how the idea the government creates and controls the money supply and the private banks simply lend money which they receive as deposits are two common misconceptions which hide the reality of private money creation by banks. Historical evidence and theoretical frameworks to replace the myth of money creation by the central bank are provided in Ahiakpor (2001), Fontana and Palacio-Vera (2003), and Zarlenga (2012).

5.2.4 The Myth of Financial Intermediation

The Function of Financial Intermediation: It is widely believed that banks function as financial intermediaries. They collect large pools of funds from the small savers and channel them to investors. By making money available to investors, they perform a vital economic function. However, as stated by McLeay (2014), this intermediation function is a myth. The main function of banks is provision of money to the already wealthy via a process of money creation. In fact, the ratio of "cash" or M0, to broad money averaged over 6 across all countries in 2000, showing that banks create five times as much money as they receive in deposits. Obviously, if banks only lent what they received (intermediation) this would be impossible.

5.3 Regulatory Capture

It has often been suggested that the problems with the banking sector described above can be solved by regulations – laws to prevent behaviour which is harmful to the public. In fact the fundamental problem is that money creation by banks is legal, and the only way to regulate this is to change the entire

system in radical ways. This kind of solution will be discussed in the next section. Without making such radical changes, attempts to regulate the system are doomed to fail. That is because those being regulated have the power to create money, which provides them with enormously greater resources than the ones doing the regulation. In this uneven match, the regulator often loses; this problem has been termed "regulatory capture". Some examples are given below to illustrate.

To cite just one example out of hundreds, we consider the case of the CFTC – Commodity Future Trading Commission. This was designed to be an independent regulatory agency to protect consumers from fraud, manipulation, and abusive practices. In 1988, Wendy Gramm was made chairwomen of the CFTC. As chairwomen, she exempted Enron from regulation in trading energy derivatives, which later became the source of one of the biggest financial scandals of the 20th century. Later, after exempting Enron from regulation, she joined the board of directors of Enron at a very lucrative salary. Bruce Levine, one of the judges handling cases at CFTC was directed by her to never rule in favour of complaints about malpractices. He faithfully complied with this directive, as reported by his fellow judge George Painter.

Matters have progressed far beyond regulatory capture. As the strength of the financial sector has grown, they have captured the bodies responsible for making laws about regulation – the Congress itself. The Glass-Steagall act was a simple affair of about 30 pages, simply and clearly banning banks from investing in the stock market, and other risky ventures.The repeal of Glass-Steagall in 1999 played an important role in allowing banks to undertake risky gambles with created money, and led to the global financial crisis (GFC) of 2007-8. This led to the widespread recognition that something like Glass-Steagall was necessary to prevent future crises. However, the replacement that was enacted, the Dodd-Frank act, was a 300 page monstrosity full of loopholes which would allow banks to circumvent the regulation. Many such attempt to create regulations to prevent future crises were either blocked or rendered ineffective in the Congress. The result is that nothing has been done to address the causes of the GFC; this is because the GFC actually helped the finance industry to greater profits via trillion dollar bailouts (again an instance of governmental capture), while causing enormous damage to all other parties.

The actual amount of power and wealth wielded by top executives of multinational is kept as a carefully guarded secret. The wealth of the world's

billionaires now stands at $7.3 trillion, an increase of 12pc from last year, according to a new report released September 18 by Wealth-X and UBS. There are a record 2,325 billionaires in the world, up from 2,170 in 2013 and 1,360 in 2009, the first year following the financial collapse. The public is quite unhappy with the perceived inequalities, while the public perception of inequality is far less than the actual inequality which prevails. Kiatpongsan and Norton (2014) found that Americans believe CEOs make roughly 30 times what the average worker makes in the U.S., when in actuality they are making more than 350 times the average worker. "Americans drastically underestimated the gap in actual incomes between CEOs and unskilled workers," the study says. Also, this gap between public perception and reality is the highest in the USA – the same gap exists in other countries of the world, but is less dramatic. It is also important to note that this gap has widened dramatically over the past 30 years, directly as a result of financial de-regulation which has given increasing wealth and power to the elites. The ratio of pay of top executives to average worker has gone from 30 to 1 in the 70's to 300 to 1 in the new millennium.

6. An Islamic Plan

Now that the nature of the problem is understood, we can discuss how it might be solved. First note that Muslims have in general been looking for solutions at the wrong level. Assuming that banking system performs valuable functions they have sought to retain the banking system while changing those parts which are in conflict with the Sharia. This cannot work since what we really need is an alternative to the banking system itself. Following the Great Depression, a set of leading economists analysed the failings of the system, and came to the some of the same conclusions that we have described above. They realized that the only solution was to prevent money creation by banks, and to return this power to the government, where it belongs. In order to accomplish this, they created the "Chicago Plan" which would transform the existing banking system to eliminate fractional reserve banking, replacing it by 100% reserve banking. There are many complicated details involved in making the transition in a smooth fashion, so that the economic system continues to function. What is important to understand is that the financial system is a co-ordinated and coherent system, where all parts function in harmony. Therefore, making partial changes in one part is unlikely to work. Below we present system wide changes which would be required to bring the financial system in harmony with Islamic principles. We adopt some aspects

of the Chicago Plan, mainly the 100% reserve banking system, and add many other aspects which are important from the Sharia perspective.

Historically, in the USA, the plan generated a lot of interest, and was discussed at the highest levels. Eventually it was defeated by the financial powers, as it was extremely harmful to their interests. Similarly, there has been a revival of interest in the Chicago Plan following the global financial crisis. However, it is highly unlikely to be adopted, since the financial lobby in the West has much more power today than it did in the post-depression era. However, the situation is different in Islamic countries. If Muslim leaders, *Ulema*, and intellectuals understand the issues, it would be possible to change the monetary system towards a 100% reserve based system. The domestic financial powers are not yet strong enough to capture the governments. The global finance industry is very strong, but may be thwarted by appropriate strategies based on domestic interests. Nonetheless, it would be a tough battle. The first step in the battle is to get a clear understanding of the issues involved.

As discussed in my earlier paper Zaman (2014), we would need several different types of specialized institutions to replace the current homogenous banks. We would need several different types of banks, for current accounts, savings accounts and investment accounts. In principle, many of these could be combined – that is housed in the same building, or as different departments of the same unit. However, since they perform entirely different functions, we discuss each of them separately. We outline the financial institutions of an Islamic economy below.

6.1 Darul-Amanah

These institutions are the equivalent of current accounts today. The deposits are demand deposits, which means that they are available any time the depositor wants. These will be purely for the safekeeping of money. In additions, they could facilitate transfers of money, purchases via debit cards, and many other currently familiar transactions utilizing checks and checking accounts. The main object of these banks is to provide for liquidity.

In existing banking structures, the bank provides these services either for free, or for nominal charge. This is because the deposited money allows the bank to create private money up-to ten times the amount of the deposit. Profits on this created money compensate the bank for the cost of the services provided. In a 100% reserve banking system, the bank would not be able to

create money on the basis of the checking account deposits. One option is that the bank could charge a service fee for the provision of services. However the second option may be superior. This is to allow the bank to borrow money from the government in a fixed proportion to its deposits – for instance at the ratio of 10 to 1. During the transition period, the ratio should be set to be equal to the amount of money created by the bank, so that minimal disturbance in the money supply occurs. The money supplied by the government could be a zero interest loan, or it could be on basis of musharka to comply with the Sharia.

In effect instead of allowing the bank the privilege of private creation of money, the money will be created by the government and loaned at zero percent interest to the bank. The advantage of this is that the liquidity of this new system will be the same as that of the fractional reserve system – If the bank is prohibited from creating money, and nothing is done to replace it, that will cause a severe contraction in the overall money supply and lead to a recession. Another advantage is that the government now has two instruments for precise control of money supply – it can fix the ratio at 10 to 1 or higher or lower amounts depending on the liquidity required by current economic conditions. It can also vary the rate of Musharka profit share given to the government from a base of 50% to higher or lower values, depending on the demands of the economy at the time. The money which can be borrowed from the government by the Banks may be deposited in Savings Banks described next; unlike current accounts, these accounts earn a small profit for the depositor.

Since there is no chance of bank runs in a 100% reserve system, the depositor's money is always safe. However, there is an inflation risk attached. As we will explain later, it is likely that inflation will be much lower in an Islamic economy. Nonetheless, if inflation does occur, it is possible for the government compensate the depositors. This is because the government is the guarantor of the value of money. Any losses suffered by depositors due to fluctuation in the value of money can, in principle, be compensated by the government. We do not discuss details of how this could be done, since at the moment we are only interested in providing a broad outline of the plan.

6.2 Savings and Loans Institutions

The second type of account is called a savings account, which is distinguished by the fact that it earns interest. In an Islamic structure, the depositor should

understand that all of his money in the savings account will be utilized by the bank to make short term, safe transactions which will typically earn some profits. The bank will share these profits with the depositor, without committing to any specific percentage in advance (as in the interest rate system). In rare cases, it would be possible for the bank to make a loss. This is discussed later. The depositor has the choice of allocating his savings between checking and savings accounts in any proportion that suits his economic conditions.

The Savings and Loan association will make extremely safe loans, of the type associated with conservative banking of the Keynesian era. In fact, these transactions resemble the current transactions made by Islamic banks. These are mostly murabaha loans, which charge a small, agreed upon mark-up on a short term loan to purchase goods for re-sale. Islamic Banks should attempt to provide services, and also to be specialized. Thus, purchase and re-sale could involve the bank having storage facilities and warehouses. For agricultural produced, the bankers could purchase at the farm, and transport produce to the market place or the mill. Thus the bankers should be involved in the provision of real services, associated with the businesses to which they lend. Another type of Murabaha could involve instalment sales. The bank purchases a good and resells it to the consumer with a knownmark-up over cost of say 10%, and allows the consumer to pay for the product in twelve equal instalments. These type of transactions should not be sham, as they sometimes are currently. The bank should follow Islamic principles in genuinely taking possession of the goods, before delivering it to the consumer. The profits earned from these short term transactions for provision of liquidity should be shared with the depositors according to some mutually agreed upon ratio – for example 50% and 50%.

There are two elements in the proposal which make the savings and loan an Islamic institution. One is the explicit understanding the bank will utilize the money deposited for investments. In this case, the depositor become the Rabb-ul-Mal in a mudarba transaction with the bank. Sharing in actual profits replaces, and eliminates interest. In this situation, the bank is not required to hold any reserves. However, the depositor should be able to withdraw money only upon provision of sufficient notice to the bank, say one month. This is why the Savings and Loan is required to make only short term highly conservative investments, which can easily be liquidated.

There are two ways in which the government will play a role in the Savings and Loan. Firstly, in the fractional reserve system, the Savings and Loan could lend ten times the amount of its deposits via the mechanism of

private money creation. Restricting the amount available to the actual deposit will result in a loss of liquidity in the economy which could cause a recession. The solution would be again for the government to create money up to ten times the private deposits in the Savings and Loan, and provide this money as an additional deposit. That is, the government also opens an account at the S&L governed by the same principles as the savings account of the other savers. It will get a share of the profits generated by the short term investments of the bank. An essential and important aspect of this idea is that when government creates money, it would be able to do so in a countercyclical fashion, according to the needs of the economy for growth and employment. As Minsky and many other authors have shown, private creation of credit has the opposite feature, and also removes control of money supply from the government.

The second role that the government can play is to reduce or eliminate the risk to the depositors. In the rare cases, where the bank makes a loss, the government may authorize use of its funds to make up the loss, so that the depositors are insured against losses. While private schemes like this have elements of both gambling and interest, and are likely to be Haram, an Islamic government can act as a guarantor of loans in the last resort. Thus it can provide these services without violating the Sharia, provided that the contracts are designed suitably.

There is an important conceptual difference between the Islamic Savings and Loan and its Western counterpart. The Western versions are purely financial institutions, with minimal or no involvement in real world business operations. Islamic law requires that services should be provided in order to justify earnings. Thus, the Islamic institutions should participate in real world ventures, and provide other services in addition to purely financial services. This will necessitate a differentiated structure of institutions, because some knowledge and skills relevant to different types of real world businesses will be required. We now list a variety of differentiated specialized savings institutions that could come into existence in an Islamic economy. These could be housed within the Savings and Loan, but they could also be separate institutions. It may be possible for the general purpose S&L to invest in these specialized institutions both to diversify its portfolio, and also to keep at arm's length from the real world, which is the current practice. In this way, both goals of separation and of provision of service could be achieved by the general S&L institutions.

6.3 Differentiated and Specialized Savings Institutions

In order to be halaal, earnings must be tied to provision of service. Also, provision of financing is not considered to be a service that can be used to earn money in a risk free fashion – this is the rule against interest. Therefore, Islamic institutions must necessary be more closely linked to real world service provision than existing western institutions. This will require a differentiated structure of institutions, some of which are described below.

6.3.1 House building Finance

One of the major purposes of savings is to finance purchase or construction of a house. Until recently, England used to have building societies owned on a mutual and cooperative basis, organized to provide mortgages to people to enable them to purchase homes. This could provide an initial pattern for an Islamic institution. However, the Islamic analogue would do more than just finance loans. It would have contacts with architects, construction companies, real estate agents etc. Because these building societies would be large and act on behalf of many consumers, they would embed a lot of experience which the typical home buyer does not have. Thus, the Islamic house building society which would be mutually owned by people planning to purchase homes, would be able to provide very valuable real services to its customers. One of the important modes of financing would be Istisna' where the buyer contracts with a construction company through the House Building Society to have a house constructed via instalment payments. House building societies could own stocks of houses and also provide many other types of services related to the rental and purchase of houses. The point is that a specialized institutions which allow customers to save towards purchase, or other kinds of long term housing service contracts, would be of much greater value to society than the current system which provides purely financial services.

6.3.2 Transport Societies

Similarly, a specialized mutual cooperative society for provision of transport services could arrange for purchase of cars. People could have savings accounts which would be the basis of loans to lease or purchase cars from the society. As already discussed, such a society would provide many other services to its members. Like auto clubs, it could provide emergency road services, as well as all types of car repair services. It could run car-pooling services, and also arrange for rentals and bus services. Lease-purchase

agreements enabling customers to buy cars on instalments would only be one of the transport related services provided by the service oriented Islamic institution. This would differentiate it from western counterparts which create clear separation between pure financial services and real services.

6.3.3 Hajj Services

The successful Tabang Hajji association provides a template for a specialized savings institution which could easily be replicated over the Islamic world. Muslim customers who wish to save up for Hajj could open accounts here. The specialized nature of the savings would enable to the institution to focus on investments related to provision of Hajj services to its customers. The institution would invest in transport services, rent or own properties near the Holy Places, and make other arrangements to facilitate pilgrims. Thus it would be in a position to efficiently serve its customers with a complete range of services related to Hajj.

6.3.4 Investment Banks

These could be on the pattern of existing investment banks in the west, but would need to ensure compliance with Islamic principles. These banks would engage in risky ventures, and provide much larger profits to their clients than are available elsewhere. At the same time they would share the risk of losses, since the gains from business are tied to the associated risks, according to Islamic law. People with money in excess of their needs could pool (to spread risk) and invest in business ventures, hoping to make a profit in order to carry out some project of value from the Sharia perspective. It is important to note the accumulation of money without purpose is not permissible in Islamic law. Thus all institutions for accumulation of wealth should be accompanied with educational institution providing training in the permissible uses of wealth. This is to avoid Islamic sanctions against those who collect wealth without meaning to spend it for the sake of Allah.

Islamic institutions will operate exclusively on the basis of partnership, sharing in profits of the project financed. This will create ownership, giving the institutions a stake in the venture. Currently, about 70% of new business start-upsin the USA fail, resulting in loss of large amount of savings of enterprising people in private sector. Banks provide loans backed by collateral to these ventures, and therefore do not have an active interest in success or failure of the venture. A partnership arrangement should lead to a substantial

reduction in this failure rate, as the bank will have experience and size to be able to protect the starting entrepreneurs from mistakes. Also, government provision of money could also provide some insurance against failures, so as to nurture entrepreneurship which is the heart of an economy. This should lead to substantial gains in productivity in an Islamic economy.

Another major shortcoming of the current financial system can be rectified by switching from private money creation to government creation of money. As the government will supply banks and other financial institutions with money on an interest free basis, it can also regulate how this money is to be spent. For instance, it could require that 10% of the money provided by the government should be lent as Qarz-e-Hasna, for the needy. It could regulate and audit departments set up by the bank to screen applicants and provide money as an interest free loan to eligible parties. Similarly, there are many cases where the social returns from investment far exceed private returns – for example in educating children. Also there are many cases where private returns to investment are positive while social returns are negative – cases of high pollution industries, or of sale of culturally damaging products like pornography. Here the government could require banks to evaluate social returns, and provide incentives to do lending in accordance with social returns. This could not be done by profit motivated private sector banks, but there is no difficulty in the government setting up rules by which money it lends at 0% interest is to be used.

6.4 Awqaf

Awqaf form a central and essential element of the financial institutional structure of an Islamic society; they replace insurance, which is central to capitalist finance. We provide a brief explanation of this aspect. Due to violent religious warfare in Europe, consensus emerged on using a secular basis for political organization; for a detailed exposition, see Zaman (2015). The concept of a society as an organic whole was replaced by the idea of individuals pursuing separate goals within a common social and political framework. Within this framework, collective action becomes the responsibility of the government. Thus, provision of social services became a responsibility of the government. In the process of colonization, most Islamic lands came under European rule. Indigenous Islamic political, social and economic structures were weakened or destroyed, and replaced by European institutions. This has led to a tremendous gap in provision of social services in Islamic societies, as governments have failed to provide the required level of services.

Historically in Islamic societies, social services have been community based, and have been provided by Awqaf. Hoexter et al. (2002) show that the waqf was central to Islamic civil society, and provided a vast range of social services. The neighbourhood is a vital component of an Islamic society, and there are many religious commands and requirements, such as regular prayer at the local mosque, designed to build community. The rights of neighbours were emphasized so much by our Prophet S.A.W. that the companions thought that they might even receive a share of the inheritance. Awareness and fulfilment of these rights would automatically create a community within neighbourhoods. These communities provide the means to translate certain Islamic ideals into practice. While it is understood that providing food, education and medical care to all within the society is a collective responsibility, individuals cannot fulfil it. Also, the government is not well placed to fulfil these responsibilities efficiently. In Islamic societies, the communities provide the means to convert these ideals into practice. The usual method is by means of the Waqf, which are often set up by communities, and supported by governments.

Efficient provision of social services requires detailed local information which is available to communities, but not to governments. Many operational models for social service provision have demonstrated the value of public-private partnerships, with the result that NGOs are playing an increasingly important role in this area. However, this solution neglects the vital role of communities, and the results being achieved also demonstrate this deficiency. In the Islamic model which functioned efficiently to provide health, education and welfare to all, the Trust or Waqf organized by communities played a vital role. The ownership of the Waqf by the community makes an essential difference. If the government plays an enabling role, and provides some minimal levels of support to communities, this could create the basis for revolutionary improvements over current models. To illustrate the potential, we provide a few examples.

The Grameen Bank succeeds in getting high repayment rates and returns in poor communities where transaction costs in terms of gathering information on creditworthiness and enforcing repayments would be too high for a commercial operation. Inside information and social pressure based on community is crucial to its success (Stieglitz, 1990). The Orangi Pilot Project succeeded in laying down sewer lines in a poor neighbourhood at minimal cost because of community involvement; see Khan (1998) for details. The community knew which members could afford to pay, and could enforce an equitable distribution of the burden. It could also exploit

knowledge of relevant engineering skills available with members of the community. Similarly, Bowles and Gintis (2006) provide many more examples of successful operation of community based initiatives and firms in situations where conventional theories predict failure based on incentive and informational problems. In line with our suggestion that government needs to play an enabling role, they point out that communities are fragile, and government policies can make or break communities.

Moving the power of money creation to the government will provide an opportunity to finance projects with high social rates of return, based on the empowerment of communities. The current private creation of money maximizes investments in projects with high private rates of return. However, economic history provides ample testimony that the private and social returns of projects are often diametrically opposed. Currently projects which destroy the planet, inflict massive social harms, but bring massive returns to a very small segment of society, are strongly favored. Only when the government creates money, will it be possible to shift the financing of projects to those with the highest social returns.

6.5 Alternatives to Insurance

In many ways, insurance is at the heart of modern financial system, and bears major responsibility for the global financial crisis. We will argue that insurance of certain types is a natural government monopoly, and private provision of insurance can be, and has been, extremely harmful to the public interest. Current attempts to Islamize insurance are by means of Takaful, which attempts to replicate private insurance within the framework of the Sharia. The alternative we propose is substantially more radical.

In the first instance, for many kinds of insurance, a cooperative scheme is the preferred Islamic model. A community which understands that provision of care to the sick is a collective social responsibility may hire the services of doctors, and necessary medical infrastructure, to provide this service. The costs would be shared collectively by members of the community, fairly, in accordance with their ability to pay – not according to their risk factors. The spirit of the Islamic insurance contract is cooperative; it is based on social responsibility of taking care of the needs of members of the community. It is not adversarial like typical modern private insurance contracts. The government would be a natural provider of re-insurance, taking care of the larger risks which cannot be handled with local resources. In fact the government always bails out private sector after major crises, but our

institutional structure would formally recognize this role of the government. Government ability to create money would be an important asset in enabling the government to play this role of re-insurer effectively. We now provide a long list of reasons why our proposed Islamic structure for insurance is substantially superior to existing private market models which are being mindlessly imitated.

6.5.1 False Promises and Gambling

From the Sharia point of view, insurance companies (and re-insurance companies) make promises that they cannot fulfil. The insurance companies do not provide any service; they provide a gamble which is negatively correlated with other risky positions of the insured. Thus the insurance contract is a gamble, where the statistical odds are very much on the side of the insurance companies. However, sometimes they do lose, causing great harm. If the number of claims substantially exceeds statistical averages, the insurance companies go bankrupt. The collapse of AIG, the largest insurance company in the world, is a recent spectacular example. In this, and many other instances, government intervened to prevent the collapse, thereby showing its hidden role as the real background insurance agency. Formalizing this role by removing the middleman private insurance company would have many important benefits to society.

6.5.2 Social Benefits

Islamic rules in all spheres, including business, are meant to generate community, cooperation and good-will. The provision of insurance on a cooperative basis, as suggested above, builds on natural human sentiments of sympathy for those who suffer. Psychologists have found that infants are born with these sentiments; they empathize with feelings of others, and take action to help when they can. Modern adversarial insurance contracts create precisely the opposite motivations – they are based on taking advantage of the potential sufferings of the others. The insurance agents wants to exaggerate the probability and intensity to potential losses to induce customers to buy and to pay high premiums. However, when the time comes to pay a claim, the insurance adjusters are trained to minimize the value of damages so that the firms pay as little as possible. The adversarial contract creates moral hazard – customers may cause themselves damage, and make exaggerated claims, to maximize their payoffs. A cooperative contract would substantially reduce

this moral hazard, because it operates on the basis of social norms, rather than market norms.

6.5.3 Avoiding Concentration of Wealth:

It has been well known since Adam Smith that only the wealthy can offer insurance, since the large risks involved require large collection of assets. Furthermore, the importance of insurance – required for all loans for purchase of cars and homes, and in many other instances – ensures that those who are able to offer it, will earn good returns on their money. Using re-insurance contracts, the wealthy can make huge amounts of risk free additional money from their wealth in ways that are simply not possible for the less rich. Thus provision of insurance by private parties creates an enormous concentration of wealth, as is currently being witnessed in capitalist societies. The cooperative scheme suggested above, with the government as a backup re-insurer, eliminates this problem. Cooperation allows pooling of money for sharing of risks. For large risks which cannot be handled by pooling, the government provides additional safety. In either case, we do not involve wealthy by-standers to provide insurance for profit, which creates concentration of wealth.

6.5.4 Too Big to Fail

The great depression brought home the lesson that core financial institutions of a capitalist economy cannot be allowed to fail; their failure would seriously disrupt all functions of the economy. Since then, governments have bailed out large corporations in emergencies. Thus, in effect, the government has always provided backup insurance. However, the current financial structure is such that wealthy financiers make huge profits by gambling, and covering their bets with insurance. On the occasions they fail, the government steps in to cover their losses, which means that the public pays for this loss. In all cases, the money goes from the poor to the wealthy. By creating cooperative insurance contracts, and removing private for-profit insurance, the public will still collectively bear the burden of large catastrophes, but will also gain the benefits previously enjoyed by wealthy insurers.

6.5.5 Natural Government Monopoly

The many financial crises caused by unfettered greed have led to a nearly universal consensus on the need for regulation of financial institutions. This recognition itself runs counter to central free market ideologies because it

assume that (1) the free market requires regulation, and (2) the government is capable of regulating. As we have already discussed, this is an unequal battle; the immense financial resources in private sector overwhelm the regulators and the regulation process, leading to regulatory capture[6]. The only solution is for the government to take over the functions of large insurance companies. Furthermore, this is natural, since it is the responsibility of the government to respond to major disasters whether natural or man-made, and to look after public welfare. In the field of insurance, the government can ensure by law that everyone must be insured. This eliminates problems of adverse selection, and also the practice of risk screening by private insurance companies, both of which cause serious difficulties with private insurance schemes. Thus there are many ways in which insurance is a natural government monopoly.

6.6 Banning Speculation

One of the reasons that the financial sector has grown enormously over the past thirty years is the illusion of wealth creation. It has been asserted vigorously that a rise in stock prices or in land prices creates an increase in wealth. In fact, this wealth is an illusion. At the time of the global financial crisis, the value of financial derivatives was about ten time the entire planetary GNP. After the crisis, more than half of the wealth disappeared, even though there was no physical destruction of any sort. Similarly, the amount of foreign exchange traded is many times the total real value of world trade. The vast majority of these transactions are purely speculative gambles. These have increased dramatically after the repeal of the Glass Steagall act, whereby restrictions on gambling by banks were removed. In addition, the growth of derivatives is an essential accompaniment of this phenomena. In effect, derivatives allow the hedging of bets. One can gamble on a stock to increase, but also buy a derivative to protect against a decrease. Thus one can make relatively safe bets, where the gains can be large, while the losses are limited.

The introduction of complex derivatives of different types has turned the financial markets into a huge casino where sharp traders can prey on the unwary innocents. Huge amounts of money are made by technical manoeuvres

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[6]As an illustration, Senator Blanche Lincoln from Arkansas, argued that government-run insurance plan undermined free-market competition. In Arkansas, a single insurance provider Blue Cross Blue Shield has 75 percent of the market. Insurance premiums have risen five times as fast as wages, yet the state representative argued against government provision of insurance.

of no social value, which rewards the financial sector at the expense of the real sector. This extreme distortion of real incentives leads to apparent growth in wealth, while productivity and employment are declining. The excess financial wealth generated also finds its way into land and real estate, causing rising prices and rewarding the ownership of assets, instead of production. In order to improve productivity and employment, it is essential to put several kinds of restrictions on the markets to prevent speculation.

Many markets have rules to prevent excessive variations in stock prices. In purely speculative processes, bubbles are common in stock markets, where the prices become completely de-linked from the real world assets they represent. The prices are governed purely by speculative movements. In an Islamic framework, this can be avoided by maintaining strong linkage between the value of the stocks and the value of the ownership of the real assets the stock represents. Firm valuations can be realistically determined in many ways, and the stock price should only be allowed to vary within a small range of this real price. Similarly, real estate prices should also be controlled so as to prevent bubbles. The dangers of pure speculation, as represented by High Frequency Trading, are now being widely recognized. There are many useful proposals which have been made to eliminate gambling, while retaining investment, exactly as Islamic laws suggest.

The main point is the activity which provides service to society should be rewarded, and opportunities for making money by purely speculative activities should be severely restricted. If this is done, the real productivity and real wealth generation will increase substantially, while the illusion of wealth creation will decrease. Using current accounting procedures which treat both types of wealth creation in the same way, it might appear that Islamic law reduces growth. To fix this problem, we must change our accounting methods. Many suggestions on how this can be done have been given in the Stiglitz-Sen-Fitoussi (2009) report, which details shortcomings of current methods of calculating the GNP. An Islamic approach would build on this and go further. Encouraging real productivity would provide incentives which would be far more favourable for wealth creation than the highly distorted incentives produced by current financial institutions.

7. Answering Common Objections

A very large proportion of the money currently in existence is bank-created money, or demand deposits. The Chicago Plan proposes to replace this money

by government created money. As we have discussed earlier, the government will print this money and provide it to banks, to replace the bank-created money. This is essential for a smooth transition from a bank-created money based system to one in which the sole power for creation of money lies with the government. Because free market arguments are currently dominant in the academia, this will strike many as being a bad idea, because governments should have a minimal role in a free market.

Over the past thirty years, the removal of restraints on banking and finance has led to an unprecedented boom in the finance industry. They have used this wealth to finance a huge amount of propaganda in favour of free markets, and against governments. According to standard and dominant views, governments are inevitably corrupt, and government interference with free markets is the single most important obstacle to progress. Thus, provision of the power to print money to the government would necessary lead to harmful outcomes. According to these dominant views, it is essential to keep this power in private hands, and ensure that the Central Bank is independent of government authority and control.

7.1 Fear of Big Government

Numerous books, movies, and other popular media make the argument that "freedom" is the most sacred value, prized above all other things. Economic freedom is one element of this freedom. This requires that the free market should be allowed to operate without any regulations. To the extent that governments interfere with freedom, they are bad. This argument has become part of mainstream economic teachings over the past thirty years. Thus it is taught to economists and policy makers the world over. These teachings are encapsulated in the "Invisible Hand" theory, according to which, if all agents act freely in their own self-interest, the best social outcomes result. The false paternity, and myriad failings of this theory which is currently taught in economics textbooks are documented in Zaman (2013) and Amiruddin and Zaman (2013).

Following the free market failure graphically demonstrated by the Great Depression of 1929, the necessity of government interventions, had become obvious to all in the Keynesian era, Many authors have documented how the campaign to eliminate Keynesian ideas, and promote the free market ideology, was successfully carried out in the last quarter of the twentieth century. Large numbers of institutes, think tanks, organizations, scholarships,

conferences etc. have been funded and organized to promote free market views. A brief but revealing documentation of the propaganda campaign for free markets is provided by Alkire and Ritchie (2007). An insightful and revealing book length treatment is provided by Naomi Klein (2011) in *The Shock Doctrine: The Rise of Disaster Capitalism*.

7.2 Fear of Government Corruption

The idea that governments are always more corrupt than the private sector is contrary to the historical facts. Over a hundred major documented financial crises of the past century have been due to corruption in the private sector. The private sector financial scandals running into trillions of dollars in the USA have far outweighed any public sector scandals. In fact, the vast majority of the public sector scandals have also resulted from the purchase of government officials and policies by wealthy private sector institutions and individuals. Recent Supreme Court rulings in the USA have removed limits on private contribution to political campaigns. Commenting on this change, Democracy 21 president Fred Wertheimer remarked that "The Supreme Court majority continued on its march to destroy the nation's campaign finance laws, which were enacted to prevent corruption and protect the integrity of our democracy. The court re-created the system of legalized bribery today that existed during the Watergate days."

The three major banking crises discussed in Section 5.1 all arose from corruption in the private sector. The cumulative effects of these crises were sufficient to wipe out all gains made in the financial sector since the beginning of the twentieth century. Revolving door appointments from commissions which regulate businesses to board members of giant multinationals, testify to the power of the private sector to influence congress. All this power derives from the ability to create money. At this point, glaring failures of the private financial sector have led to nearly universal consensus on the need for regulation. If the government can be trusted to regulate, it can also be trusted to handle the creation of money.

This is not to suggest that we should be blasé about the possibility of government corruption – definitely there is a huge amount of evidence of government corruption everywhere; both in the east and in the west. However, the idea that the government is special in this regards, and there is no corruption in the private sphere is a myth – people can be honest and corrupt, and with same people in both spheres, we can expect equal levels

of corruption in both places. Just as we require regulation to try and control corruption in the private sphere, so suitable schemes can be devised to control corruption in the government sphere. There exist many successful models of strategies that could be employed for this purpose, if the will is present.

7.3 Fear of Reduced Growth

Due to ideological propaganda, it is widely believed that free markets provide the engine of growth, while government control stifles productivity and innovation. In fact, history teaches a radically different lesson. Throughout history, as well as currently, the effect of free market policies has been to allow for the concentration of wealth into a few hands. Just last year, fifty new billionaires were created in the USA, while the bottom quintile saw a decline in real income[7]. The same has been true the world over as introduction of free market policies in Chile and Russia, and many other parts of the world led to the creation of billionaires, and the coming of hunger, poverty and starvation to countries where all had been fed in socialist regimes. While there is not a single instance of free markets leading to development and progress, all cases of rapid economic growth have required strong and stable governments, which have guided the growth process through many kinds of active interventions. This has been just as true in USA, Germany and Japan, as well as in East Asia. Thus the idea that giving governments the power to print money is a recipe for disaster is just a myth spread by those who benefit directly from having current control of this power. In "Peddling Prosperity", Krugman has documented that while the free market policies of Reagan and Thatcher had little or no effect on growth, there was a massive increase in inequality, and in the share of income going to the wealthy.

7.4 Fear of Inflation

The idea that if governments are authorized to print money, they would print huge amounts for themselves and thereby cause inflation does not match the

[7]http://www.dawn.com/news/1134923: THE wealth of the world's billionaires now stands at $7.3 trillion, an increase of 12pc from last year, according to a new report released September 18 by Wealth-X and UBS. There are a record 2,325 billionaires in the world, up from 2,170 in 2013 and 1,360 in 2009, the first year following the financial collapse. The stock market and finance capital are the driving forces behind the wealth of the world's billionaires. The top industry for billionaires, according to Wealth-X, is 'finance, banking and investment,' which accounts for close to 20pc of the total billionaire population, followed by industrial conglomerates at 12pct and real estate at 7pc.

historical evidence. Ellen Brown (2011) analyses many hyper-inflations that have occurred in the past century. She shows that while economists argue that these have been due to over-printing of money by the government, in fact the causes have always been related to the private creation of money by banks outside the control of the government. Many cases can be documented in the recent past where huge amounts of money have been printed by central governments without leading to inflation. For example, trillions of dollars have been printed under quantitative easing programs in the USA without leading to a corresponding increase inflation; see figure in section 9.4.1. Thus the link between government creation of money and inflation is not as strong as claimed by those who wish to keep money creation in the hands of the wealthy elites who own banks. See also Zarlenga and Poteat (2016) as well as comments on this article, for an extensive discussion.

Historically, there are many countries where central banks have been under government control, but there is no evidence of any disaster associated with such control. Since governments are held responsible for economic conditions, they have a strong incentive to manage the economy well. Nonetheless, to curb abuse, government control should be subject to strict regulation, just like the private financial sector. Money creation by central bank should be supervised by politically neutral authorities as well as independent experts. Interestingly, there is a natural check on seigniorage and inflation tax – its burden falls disproportionately on the wealthy. This is entirely the opposite of private creation of money which is a burden on the poor. Given that the rich and powerful classes will oppose excessive creation of money, the government is unlikely to go against their wishes.

8. Advantages of the Islamic Plan

We have presented above the bare bone outlines of the structure of a collection of Islamic Institutions as an alternative to the current structure of modern financial institutions. At the root of the changes proposed is the government creation of money. The power to create money must be removed from the private sector and given back to the government where it belongs. However this one change is not sufficient to transform financial institutions to comply with Islamic ideals. A collection of related changes are required on several different fronts. A detailed presentation of all the changes required would be too lengthy to present in a brief article like this one. However, the changes have an organic nature. Once the spirit of the change is clear, required extensions, and removal of obstacles would occur naturally as part of the

process of transition and growth. Only some key elements of the required changes have been sketched above. While justifications for these required changes out have been discussed, we recapitulate some of the main issues, and also provide some additional reasons in this section. Perhaps one of the most important arguments in favour of our Islamic Plan is the elimination of inherent injustice in the private creation of money.

8.1 Justice

It is extraordinarily unfair and unjust to allow a small segment of the already wealthy to have the ability to create money. This privilege allows them to amplify their wealth at the expense of others. According to Sharia rulings, money creation is a privilege of the government. To capture this privilege for themselves, a tiny minority of the powerful elite have strongly pushed for central bank independence all over the world. For further details, see "The Battle for the Control of Money," by Zaman (2016). Current economic theory argues that the power to create money lies with the central bank, and that this should power should not be given to the government, as it will give favours to cronies and buy votes. Against this hypothetical abuse of power, we have the following arguments to justify taking the power away from private sector banks and giving it back to the government.

The potential abuse of power by the government should be weighed against the actual abuse that has occurred via private sector creation of money. This is documented in the vast numbers of statistics which attest to increasing income inequality, mainly due to money-making strategies available only to the wealthy through the process of money creation. Furthermore, the power to create money was taken away from governments, and given to privately owned central banks using a number of stealthy stratagems, which involved concealing several facts. Details of the stratagems used to create private control over central banks all over the world are provided in several reports. For example, Henderson (2011) describes four major central banks which control the large oil companies and are among top ten stockholders in nearly every Fortune 500 company. Requests for information about top stockholders and ownership structure of these banks were denied for "national security" reasons, but there are many clues which point to eight families which control the major private banks. In nearly all of the economically advanced economies, the central banks are privately owned, but the appearance of government ownership is carefully maintained. Similarly, the economics textbooks all over the world teach that the power of money creation lies with

the government, when the facts are exactly the opposite, as clearly stated by McLeay (2104) in the quarterly bulletin of the Bank of England. All this secrecy and mis-direction is used to preserve and protect a grossly unjust and unfair system from public scrutiny.

8.2 Socially Optimal Investments

A fact which is mentioned, but not highlighted, in economics textbooks, is that the social returns to investment are frequently very different from private returns. One of the most important examples is that of the education of children of the poor. Not much money can be made from this, since the poor cannot finance education, and children often drop out to support families by working. However, social returns to educating children are enormous. As a recent World Bank report (2006) shows, a dominant component of the Wealth of Nations today lies in the "human capital" embodied in the people.

The current system is geared towards making investments with high private returns, not high social returns. Stripping the nation of natural resources, and causing environmental degradation, is in effect stealing from the entire society, as well as future generations, for the sake of private profits. This is a natural outcome of leaving money creation in private hands. If the government controls money creation, it can also have much more control over the investments to be made with this money. It can reward and encourage projects with high social returns, and discourage and penalize projects with low or negative social returns. In order to accomplish this, it would be essential to replace the GNP measure with a more accurate gauge of national wealth. This is because currently policy makers are fixated on this measure, which ignores essential elements of vital importance in the development process.

Current utilization of misleading measures of progress, as well the as the dominance of the financial sector, has led to massive investments in non-productive areas, such as real estate and stocks. For example, currently in the US economy, stock markets are soaring, while the unemployment rate, productivity, and all measures of the real economy are getting worse. Again, the root cause of this is the current financial system, which rewards all money making schemes equally, regardless of whether or not they are socially beneficial. This damaging dynamic can be changed only if the government re-captures control of the process of creation of money. Simulations done by Benes and Kumhoff (2012) show large productivity gains from implementation of the Chicago Plan, simply because government funds can be used to finance

more productive investment projects, rather than those projects which have the largest collateral backing.

8.3 Community Based Development

Designing suitable development projects requires local knowledge which is simply not available to the government. Efforts have been made to shift the burden to NGO's, and to create public-private partnerships, but effective development is only possible with the involvement of the community. This is in fact the original Islamic model, which has been used throughout Islamic history. Today the effectiveness of CBD, and its offshoot, Community Driven Development, is being more widely recognized. According to the World Bank: "Community-driven development (CDD) programs operate on the principles of local empowerment, participatory governance, demand-responsiveness, administrative autonomy, greater downward accountability, and enhanced local capacity. Experience has shown that when given clear explanations of the process, access to information and appropriate capacity and financial support, poor men and women can effectively organize to identify community priorities and address local problems by working in partnership with local governments and other supportive institutions."

Currently governments are severely budget constrained and have limited developmental budgets. Shifting the power of money creation from private sector to the government will enable the government to finance community based initiatives, which is the key to development. Government by themselves lack the capacity and the local knowledge to accomplish this, which is one reason why so many government based initiatives fail. They are based on outsiders deciding what is best for the community without sufficient local knowledge. By channelling money to socially useful projects, large gains to society will be created. These results cannot be achieved by private investors working for private profits.

The proposal to rely on community driven development is in harmony with the Islamic stress on the rights of neighbours. Five times daily meetings in local mosques were meant to foster a sense of community. Framing the problem of development in terms of creating community, instead of as a service to be delivered by the government to the public, creates many positive externalities. Empowering communities by providing governmental support for community based initiatives will create thousands of agents of change. In addition to rapid development, this would also lead to creation

of cooperation, trust, and other forms of social capital. Historical studies of Islamic societies show the vital role played by rich and vibrant communities in providing social services.

8.4 Technical Advantages

Benes and Kumhoff (2012) use simulations to show the following important gains from switching to the Chicago Plan, which replaces fractional reserve banking by 100% reserve banking.

8.4.1 Direct Control of Money Supply by Central Bank

Keynesian economic theory shows that it is important to have the optimal quantity of money in the economy. Too little can lead to recessions, while too much can cause inflation. When the bank creates money, it has immediate and direct control of the money supply. In the current system, the bank creates high powered money M0, which can, at the discretion of the banks, be translated into the money supply M1. The economics textbooks describe this is a mechanical process in which a simple multiplier is applied by the banking system to create M1 from M0. This creates the illusion that banks do not exercise discretion in the process, and that Central Banks in effect control the money supply. This is not true, as vividly demonstrated by Mian and Sufi (Chapter 11, 2014). In an effort to fight the recession following the global financial crisis, the Federal Reserve Bank has adopted a policy of "quantitative easing" – QE – substantially increasing the monetary base. As Diagram 11.1 of Mian and Sufi shows, there has been a massive increase in reserves within the banking system, but there has been virtually no effect of QE on the total money supply. This diagram also shows that the conventional textbook descriptions of money creation are wrong, as the central bank policies are completely ineffective in increasing the money supply. The banks simply absorb excess cash as reserves, without lending them out – borrowers are scarce in recessions, because there are few profitable investment opportunities. This problem would not arise under a 100% reserve system, where the Central Bank directly creates the money supply.

8.4.2 Massive Reductions in Private and Public Debt

Under the current system, banks create money by making loans. Thus the private production of money by banks is directly tied to debt in a one-to-one fashion. The amount of money created by banks is exactly equal to the amount

of debt created by banks. Additional debt is created when governments borrow from domestic sources, including the central bank. These governmental debt liabilities are huge, and debt service payments eat up a large portion of total revenue, leaving governments with very narrow fiscal margins. Typically budgets are balanced by cutting development projects, which are not only the lifeline of the majority of the population, but also the sole route to development. Private debt also exerts a drag on the economy, as documented by Mian and Sufi (2014). Thus the creation of money, which also creates debt, is not a good way to create an economic stimulus. However, under current fractional reserve system, it is the only way available.

Switching to government creation of money would eliminate or substantially reduce government debt, and interest payments on that debt. This would create fiscal margin for development projects. As long as these are directed to projects of high social returns, the growth of the economy would accelerate. The 100% reserve system would also reduce private debt substantially, especially if Islamic schemes of Qarze Hasna, financing for Community Based Development Projects and also Musharka financing were followed. This reduction of private debt would also substantially improve economic performance, as documented by Mian and Sufi (2104).

8.4.3 Elimination of Financial Fragility

A great advantage of the 100% reserve system is the complete elimination of banking crises. There is no question of bank runs, since the system requires banks to maintain full coverage for all deposits. This is also in line with the requirements of the Sharia, as discussed earlier. In addition, the problem of financial fragility highlighted by Minsky (1992) would also be resolved. The current system of private money creation acts to exacerbate the problem of business cycles. In an expansion, banks create more money, creating inflationary pressures, and de-stabilizing the system. In a recession, banks reduce lending, reducing money supplies and causing prolongations of the recession. All of these problems would be avoided by giving the power of money creation back to the government. With the complete control of money supply, the government could follow Keynesian counter-cyclical policy to reduce inflationary pressures and prevent recessions.

8.4.4. Reductions in Frictional Costs

As shown by Benes and Kumhoff (2012), the Chicago Plan will lead to lower real interest rates and also lower inflation rates. High interest rates discourage

investments and reduce growth, while high inflation rates inflict several types of adjustment costs on the economy. With access to the power to print money, taxes could be reduced or eliminated. In addition to incentive costs, this would also reduce inefficiencies due to corruption, and help improve governance. The printing of money automatically creates a just taxation scheme, since the inflation tax is proportional to existing wealth. With a lower debt burden, there would be a reduction in monitoring costs associated with repayment of loans.

The central bank will have more instruments for the control of money supply then it currently does. The interest rate and the quantity of money can be separately targeted, for example. Given that the banks will receive large amounts of money created by the Central Bank, the terms can be set by the central bank. Zero interest is not a lower bound, so that the liquidity trap can be avoided. The Central Bank can set negative interest rates if it so desires. The increased capability of the Central Bank to control the money supply leads to possibility of complete price stability with zero inflation, as shown by Benes and Kumhoff (2012).

9. Conclusions

The nature of the subject is such that this paper is lengthy and complex. To conclude, we attempt to summarize and highlight the central issues discussed at length in the paper.

First, we note that the system of fractional reserve banking allows the private banking system to create money out of thin air. The current system is such that the vast majority of money is created by the private sector, while only a little – 10% or less – is created by the government. Furthermore, this money creation is intimately tied to debt –money is created when banks make loans at interest. This private creation of money is extremely harmful to society in many ways, as discussed below.

Debt based creation of money leads to prevalence of interest and inflation, both of which are socially harmful. Mian and Sufi (2014) have explained that accumulation of debt leads to a crisis prone system. Private money creation is done to excess at times when restraint is needed, and shrinks at times when money is needed by the economy. The interest based debt contract leads to great injustice, which can be removed by shifting to equity based contracts favoured by Islamic law. Because debts guarantee returns to the wealthy lenders but not to the poor borrowers, concentration of wealth and inequality results from this system. A historical analysis is carried out

to show that these are not theoretical concerns. Rather, banks have suffered from massive crises multiple times, leading to misery for the millions, but gains for a minority elite class. Replacement of western banks by Islamic banks currently in vogue would do nothing to address these problems, as the money creation would remain in private hands.

As a certain amount of money is vital to the functioning of an economy, we cannot simply ban private creation of money. That would lead to substantial reduction of money supply and hence a recession or a depression. The Chicago plan aims to remedy this problem by having the government print all of the money that is currently being created privately by banks. Moving to a 100% reserve banking system would restrict the power of money creation solely to the government. This has the potential to eliminate all of the problems which arise due to private creation of money, as discussed in the previous paragraph. Opponents of the Chicago Plan have raised several objections which are discussed and answered in the paper.

Moving to government creation of money allows for radical reforms in the structure of financial institutions of a society. The most important change is that in a system of privately created money, money is created for projects which maximize personal profits, regardless of how much social and environmental damage is caused by these projects. However, with government in control, money would be readily available for projects which maximize social returns. The paper goes on to suggest that Islamic financial institutions would be involved in providing real services, as opposed to purely financial ones. This would lead to a differentiated and diverse structure of institutions adapted to Islamic societies. We provide an outline of what such structures might look like, and how they would be superior to current institutions which concentrate wealth and are crisis prone.

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