

REFORMING MONEY AND BANKING

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ABSTRACT:

The global financial framework is built upon the Fractional reserve banking system, which creates economic instability, unsustainable public debt, and inflation. This article presents an analysis of this system, arguing that debt-money creation is the primary problem underlying these ailments. The proposed solution is in the form of a full reserve banking system. By giving the sovereign authority of money creation to the central banks and the other banks as intermediaries, this model will allow the government to be funded without debt seigniorage. As a result of this, the government budget deficit and public debt will be eliminated, and inflation will be controlled. Furthermore, this analysis is also examined through Islamic finance, which criticizes the fractional reserve banking system as it includes Ribā (interest) and Gharar (uncertainty). The proposed full-reserved, interest-free system aligns with the core Islamic principle of risk-sharing, asset backing, and prohibition of Ribā.

KEYWORDS:

Monetary reform, Fractional reserve banking, Full reserve banking, Sovereign money, Debt-based money creation, Islamic finance financial instability, Public debt, Inflation control, Chicago Plan, Risk-sharing, Asset-backed financing, Pakistan economy, Central banking, Monetary sovereignty,

INTRODUCTION

In an age of profound economic paradox, unprecedented technological advancement coexists with financial anxiety; vast wealth is created, yet public services are constantly affected under the weight of debt. Even the governments of the most powerful nations operate in a constant state of fiscal triage, shifting from one budget crisis to the next, as the savings of ordinary citizens are diminishing due to the constant drop of inflation. For a long time, we have treated the issues (higher public debt, stubborn deficit, and rising cost of living) with gradual policy adjustment and painful austerity measures.

The global financial system is built upon an inherently unstable foundation. For centuries world has operated on a fractional reserve banking system. This system delivered both unprecedented growth and disastrous crises at alarming rates. The signs of this foundation are an increase in government debt, a constant budget deficit, and a decline in purchasing power through inflation. This article argues that they are interconnected with each other and stem from a single reason: the

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fractional reserve banking system and interest-bearing debt. By examining the flaws of a fractional reserve banking system, proposing a shift towards a full-reserve and interest-free banking system, and its resonance with Islamic financial principles, we move towards a more equitable, stable, and sovereign monetary future.

PROBLEM STATEMENT:

A fractional reserve banking system is the unstable and inequitable banking model. This system allows commercial banks to create money out of the thin air, that leads to debt based economy characterized by pro-cyclical booms and busts, unsustainable public and private debt, continues inflation and financial instability. These structural flaws are not due to economic efficiencies, but are deeply rooted into the architecture of the modern finance, resulting in wealth concentration, erosion of monetary sovereignty, and social inequality.

In a countries, like Pakistan these systemic issues manifest in the form of budget deficit, inflation, and misallocation of credit away from productive sectors towards speculative ventures and government securities. The existing monetary system not only increase instability, but it also contravenes ethical financial principles; *Ribā* and *Gharar*.

So, there is an urgent need to change this system. This article explores whether a transition towards full reserve banking system, where money creation is solely given to the state, and the banking system are separated into transactional and investment role can offer a stable and viable alternative that addresses the flaws of fractional reserve banking system, while aligning with Islamic principles and justice.

LITERATURE REVIEW:

The proposal for monetary reform have been explored from economic, historical and ethical literature.

Key scholars and institutions highlighted the faults of the current system. The *Bank of England (2014)* clarifies that most money is created by commercial banks through lending, a process that fuels economic cycles. *Minsky's financial instability Hypothesis (1986)* further explains that how stability leads to risk taking and eventual crises. *Adair Turner (2015)* noted that advanced economy rely on private credit, often for unproductive asset purchases and inflating speculative asset bubbles.

“*The Chicago Plan Revisited*” researched by *Benes & Kumhof (IMF, 2012)*, provide a modern modeling of full reserve banking system that eliminates banks runs, reduce public and private debts, smooth business cycle, and give central bank full control of inflation. This works build on earlier proposal given by *Irving Fiskin* and *Henry Simon* during great depression.

Islamic scholars like; *Dr. Muhammad Umar Chapra*, *Dr. Tariqullah Khan* and *Dr. Abass Mirakhor* have criticized fractional reserve banking system for violating *Sharī'ah* principles.

Dr. Pervez Tahir, Dr. Hafiz Pasha, and Dr. Ashfaque Hasan Khan illustrate the real world impact of fractional reserve banking system and studies on Pakistan's economy.

Contemporary advocates such as *Andrew Jackson and Ben Dayson (Modernizing Money, 2012)*, *Positive money (2016)*, and *Joseph Humber (2017)* have detailed operational framework for converting to sovereign monetary system.

RESEARCH METHODOLOGY:

This research employs a **Qualitative and Analytical** to examine the transition of converting fractional reserve banking system to full reserve banking system. It merge theoretical analysis of economic and Islamic finance literature with the comparative evaluation of both banking models supported by numerical illustration and IMF modeling insights. A focused study on Pakistan economy grounds the analysis of verified data on inflation, debt and credit allocation. The research further describes the modern monetary reform proposal with *Shari'ah* compliant principles to develop a practical transitional framework, while also addressing key objections to ensure a balanced and actionable reform pathway.

FRACTIONAL RESERVE BANKING SYSTEM

The fractional reserve banking system is an important framework of the modern financial system, characterized by a central bank that permits the commercial banks to maintain only a fraction of their customers' demand deposits (liabilities) as liquidity reserves, which comprises cash and balances held at the central bank, while employing the majority of the deposit fund to generate income through lending and investment activities.

This system operates on the basis that, in normal circumstances, the depositors will not demand full withdrawals from the bank. This allows the bank to perform dual functions:

- **Provide liquidity and payment system:**

By offering customers a demand deposit payable on demand, banks play a role as a primary medium for everyday transactions and savings storage for the public.

- **Facilitate credit creation and capital Allocation**

The bank lends out the non-reserve portion of the deposit, channels it from savers to borrowers, and provides financing to the customers.

The Bank of England clarified that the most profound implication of this structure is lending, and, in fact, the primary mechanism of money creation. When the bank provides a loan to a customer, it not only transfers funds from the lender to the borrower, instead it also creates money *ex nihilo* (out of nothing) by crediting a borrower's account with a new bank deposit, which is simultaneously a bank liability in the balance sheet and new money in the economy. Through the collective action of the commercial banks in providing loans, a vast majority of the money supply

is created, making the primary architects of the nation's circulating medium subject to reserve requirements and broader monetary policy constraints set by the central bank.

THE MECHANICS OF THE FRACTIONAL RESERVE BANKING SYSTEM

To understand the flaws of the current financial architecture, we must examine its core operating mechanism: the fractional reserve banking system. This system is an active and powerful engine that creates and destroys the nation's money supply, with inherently destabilizing consequences.

Money Creation “Out of Thin Air”

The most misunderstood critical function of the commercial bank is its ability to create new money. Contrary to the most popular belief, the banks lend out the deposits of savers, creating a vast majority of the money supply, typically over 90% through every act of lending.

How it works: Suppose a bank approves a loan for a Rs. 300,000 mortgage. Now the bank does not transfer the sum from another depositor's account; instead, it creates the money *ex nihilo* (out of nothing) by performing a simple digital accounting entry. It simultaneously credits the borrower's account with a loan agreement of Rs. 300,000 as a new asset. The deposits are spendable, effectively increasing the broad money supply. This privatized power to create money is a significant flaw because it creates a public medium of exchange, from which other problems arise.

As the Bank of England clarifies the creation of the money system:

In today's economy majority money exist at bank deposit, but the process that how bank deposit is created is often misunderstood. The main way is making loans. Whenever bank creates money it simultaneously generate a corresponding deposit in the borrower's bank account, thus producing new money (*Bank of England, "Money in the modern economy: an introduction"*) (2014).

The Inherent Pro-cyclical: Fueling booms and Amplifying Busts

The debt-based money creation is pro-cyclical rather than neutral, meaning it implies the economic cycle of boom and busts.

- During an economic boom, optimism is high and demand for loans increases. Banks respond by creating new money aggressively through lending. This flood of new money fuels the asset price inflation and increases excessive consumption, inflating speculative bubbles rather than funding productive enterprises.
- During an economic bust, default increases and risk aversion sets in. The bank responds by tightening the lending standards and calling in loans. The money supply contracts, and the loans are repaid faster than the new ones are issued. This destruction of money deprives the real economy of credit when it is most needed, deepening and prolonging the recession. The *Hymen Misky* argues that the stable period encourage risky financial behaviour, which makes the system more fragile.

In conclusion, this system acts like an accelerator pedal pressed to the floor during an uphill climb; the economy lends and invests tons of money and then slams into reverse on the way down; and the economy stops lending and pulls money back. This inherent cyclical nature ensures that the natural ups and downs of the economy are much worse, rather than calming the things that act as the primary source of the problem, guaranteeing that big crashes will happen repeatedly.

THE MECHANICS OF FRACTIONAL RESERVE BANKING SYSTEM: NUMERICAL ILLUSTRATION

In the fractional reserve banking system, banks hold the small fraction of the customer deposits as reserve, and lend out the remainder. This is the process of the fractional reserve banking system in the modern economy.

Let's assume:

Reserve Requirement: 10%

Initial Deposit: Rs. 1000 cash deposited into Bank "A"

Step 1: Initial Deposit

Mr. Y deposited Rs. 1000 in Bank A

Bank A change balance sheet as follows:

Assets increased by Rs.1000 in reserves

Liabilities increased by Rs. 1000 as demand deposit

Bank now holds 10% of the reserves

Required Reserves: Rs. 100

Excess Reserves: Rs.1000-Rs.100 = Rs. 900

The excess reserve is the basis of new money creation

Step 2: Bank's A make a loan

Bank's A lend Rs. 900 to Mr. X. Bank does not give Mr.X physical cash ; instead creates a new account on his name and credits it with Rs. 900

Now Bank's A balance sheet shows:

Assets: Rs. 1000 reserves+ Rs.900 loan to Mr. X

Liabilities: Rs.1000 (Mr. Y)+ Rs.900 (Mr. X) = Rs. 1900

Now, the new money is created, Mr. Y still has Rs. 1000 on his account and Mr. X has a new Rs. 900 to spend. The total is Rs. 1900 from initial Rs.1000.

Step 3: The Multiplier Effect Continues:

Suppose Mr.X uses Rs. 900 to purchase a laptop from Mr. Z, and Mr.Z deposits Rs. 900 into his account at bank B

Bank B holds Rs. 90 as reserve and lends Rs. 810. The money supply is now: Mr.Y Rs. 1000 + Mr.Z Rs. 900+ New borrower= Rs. 2710

This process continues in the banking system. It can be calculated by using the Money Multiplier Formula:

Total Money Supply= Initial deposit*(1/Reserve requirement)

= Rs.1000*(1/0.10)

=Rs. 1000*10

=Rs. 10000

This include the original Rs. 1000 and Rs. 900 in newly created bank deposit.

WHAT'S WRONG WITH THE FRACTIONAL RESERVE BANKING SYSTEM?

Understanding that the bank creates most of its money as debt is the key that unlocks the explanation of most continuing and debilitating problems in the modern economy. The fractional reserve banking system is an architecture that generates predictable and destructive pathologies; it is not a neutral platform for economic activity.

- **The Continuous Debt Trap:** The most important flaw in the system is that the whole economy is saddled with permanent and growing debt. Because in the money circulation, nearly every unit of money is created as principal from a bank loan, but the interest on that loan is not created; from the start, a mathematical shortfall is engineered into the system. Suppose in an economy, the entire money supply is \$100,000, which was created by the banks as principal of various loans. These loans are issued with interest payments. Now, suppose the annual rate of interest is 5%. This means that at the end of the year, the borrower must pay the total amount of \$1,050,000.

Here lies the Trap:

The principal amount of \$100,000 already exists in the economy, but the extra \$50,000 to pay the interest does not exist.

A systemic shortfall is created. It is mathematically impossible to repay the principal plus interest amount for all borrowers without entering new money into the system. It is like a game where all the players owe more tokens than are in circulation

The existing and insufficient money supply is used to repay the interest on the loan. This can only be done in three ways:

1. **New Borrowing:** The only way to get \$50,000 is to take out a new loan. Now the loan is created for \$50,000 to get rid of the old loan. However, the new loan is created with a new interest obligation, say \$2500. The economy continuously expands its debts just to service the interest on the existing debt. It is a financial ponzi scheme that requires an ever-increasing inflow of new debt to keep the debt from seizing up.
2. **Default:** When the borrowers fail to pay the loan, then the bank seizes the collateral. This wipes the debt from the bank's books, effectively destroying the money that was created. While this removes the debt from the system, it does so by economic destruction, destroying livelihoods and deepening the recession.
3. **Unfair Competition and Inequality:** As a result of finding non-existent interest money, a hyper-competitive environment is created. Businesses are not just competing

for profit; they are competing for the basic cash needed to stay in business. This inconsistency favors large businesses over small businesses. As a result, large businesses acquire the assets of small businesses.

The result is an economy on a debt trade mill. We have to constantly produce and consume stuff, not necessarily to make lives better, but to generate extra money to pay the loan's interest. This cycle of perpetual debt is the engine of our economic system. The system is designed so that all money is created through a bank loan.

- **The Government Debt Trap:** The most profound injustice of this system is public finance. Sovereign governments have the legal authority to create their own currency; instead of issuing notes, they give this responsibility to private banks. Instead of creating debt-free money, the government borrows it from private banks by issuing bonds.

Suppose the government wants to build a bridge or fund a hospital; it simply issues bonds, which can be purchased by commercial banks with the money they create out of nothing. Now the government must pay interest to commercial banks for using its own currency. This changes the public finance into a massive wealth transfer, funneling the taxpayer's money into interest on debt that need not have existed. The result is a high national deficit and structural deficit. They went into very deep debt and didn't have enough money for basic public needs like schools, hospitals, and roads. To solve this problem, they suggest we must cut spending, so they cut spending for the same schools, hospitals, and roads.

As the International Monetary Fund research by *Benes and Kumhof (2012)* argues that the large outstanding debt of government is a direct result of today's monetary system, not a necessary fact of life; that is commonly assumed.

Therefore, debates about austerity versus spending are secondary. The main issue is monetary policy itself. The fundamental question is who created the money and who gets the benefit from it; it's not merely an economic technicality.

- **The Inflation Problem:** In the fractional reserve banking system, interest is an important tool of monetary policy. The central bank attempts to manipulate the interest rate to manage the economy's price level. However, the money supply is not directly controlled by the central bank; thousands of commercial banks are also involved in this.

During the economic boom, banks create money by giving a lot of loans, like houses, cars, business expansion, etc. As a result, a ton of new money entered into the system. All this money is chasing a limited number of goods to buy. When more money chases the same amount of goods or services, prices increase, and inflation occurs. In this situation, central banks increase interest rates to decrease lending. Yet they are perpetually behind the curve; by the time they increase the interest rate, the banks have already flooded the economy with loans and lending. Conversely, during an economic

bust, the central bank lowers the interest rate to encourage people to borrow. At this point, banks often refuse to lend, and the money supply contracts. This pro-cyclical money creation for maintaining price stability makes the natural ups and downs worse.

- **The Severe Financial Instability:** The crises that arise from the structure of the fractional reserve banking system are not accidental; it is inevitable. This system is built on an important promise that it cannot keep: the promise that all depositors have instant access to their deposits, while simultaneously lending out most of it in long-term loans. This means that if all depositors want to withdraw their full deposits at once, the bank does not have enough cash in hand to give everyone their money. It's likely to be stuck in long-term loans.

During the boom, the banks lent most of their money. This floods the market and makes huge bubbles, like in housing or stocks, driving prices to unrealistic levels. When these bubbles burst, the banks that lend all their money are now in great trouble and might go bankrupt because people are unable to pay their huge loans. If a big bank fails, it could crash into the whole economy because people use banks as a medium for receipts and payments. Now, in this situation, the government is forced to use taxpayer money to rescue these failing banks. In the boom, when the banks are earning profit, the bank and its owners keep the whole profit. Consequently, when the banks bear a loss, this loss is recovered by the public through taxes.

The system generally generates an addiction to excessive private debt, which is often channeled unproductively. He said that the wealthy nations mostly depend on the private debts and most of the debt does not finance productive business; but instead they provide finance to the purchase of existing assets, particularly in real estate, inflating their prices in a speculative cycle *Adair Turner (2015)*.

This flood of unproductive credit inflates huge asset bubbles. As everyone is buying with easy money, prices get pushed higher, like blowing air into a balloon. The price of the asset is not based on its real value, but on the belief that it will keep getting more expensive. Eventually, people come to believe that the prices of the assets are too high and stop thinking they will continue to rise forever. This is pop. Now, everyone has started selling their real assets, and the prices have come crashing down. Remember that people take loans from the banks to buy real assets, and when their real assets become worthless, they can't pay back their loans. This is the wave of default. The banks that gave out all the risky loans are now going bankrupt.

In summary, the problem is not that banks are running badly; instead, the whole system is designed in this way. It creates a debt-based economy that destroys public sovereignty, fuels instability, and makes it truly impossible to have truly stable prices, while socializing its losses.

A SHARIAH PERSPECTIVE ON FRACTIONAL RESERVE BANKING SYSTEM:

The economic evaluation of the fractional reserve banking system finds a powerful and centuries-old echo in the principle of Islamic finance. The Shariah view is not merely to answer the question of the system stability but to criticize on important ethical grounds, primarily for its violation of *Ribā* and *Gharar*.

◆ **The Prohibition of *Ribā* (interest)**

The creation of money in a fractional reserve banking system is based on an interest-bearing debt. This is in direct and clear conflict with the Islamic prohibition of *Ribā*.

"Those who devour usury (Ribā) will not stand except stands one whom the Evil One by his touch hath driven to madness. That is because they say: 'Trade is like usury,' but Allah hath permitted trade and forbidden usury..." (Quran, Surah Al-Baqarah, 2:275)

This verse evaluates the difference between trade, risk sharing, and usury, which is religiously and socially destructive. The money created by banks as a debt with interest rates and considered *Ribā*, as it guarantees a return without engaging in any real or productive activities.

"O you who have believed, fear Allah and give up what remains [due to you] of interest, if you should be believers. And if you do not, then be informed of a war [against you] from Allah and His Messenger..." (Quran, Surah Al-Baqarah, 2:278-279)

The hardness of this language underscores the gravity of dealing in *Ribā*. From an Islamic lens, a financial system is not an unstable but an active transgression against the divine law.

Scholar's perspective on *Ribā*:

Dr. Muhammad Umar Chapra argues about fractional reserve banking system that When money is created as a debt with interest; as a result concentration of wealth happened in a financial sector and permanent debt imposed on the society

He claims that this system violates the Islamic objective of social objective of and circulation of wealth.

◆ **The Prohibition of *Gharar*:** *Gharar* is present in the fractional reserve banking system, which is criticized by the Shari'a. It mainly arises from the inherent misrepresentation and uncertainty in the banks' promise to depositors.

The Prophet Muhammad (peace be upon him) explicitly *"forbade a transaction with Gharar."* (*Sahih Muslim*)

Scholar's Perspective on *Gharar*:

Dr. Sami Al-Suwailem (Head of Product Development, IRTI) analyzes the bank balance sheet and argues that: While accepting demand deposits and lending out for a long-term banks promises liquidity which it cannot guarantee. This is a classical example of *Gharar*; as it creates the systemic risk which is concealed from the depositors.

◆ **Islamic Alternative: Risk Sharing and Asset Backing:**

Risk Sharing:

The Prophet Muhammad (peace be upon him) said: *"Profit comes with liability"* (*Sunan al-Tirmidhi*)

The core Islamic principle of legitimate profit by sharing the risk of ventures established from this hadith. In the interest based banking model the return is guaranteed regardless of the success of the borrower's enterprise, violates this principle. It secures the risk-free return of the lender and transfer all the entrepreneurial risk to borrower.

Scholar's Perspective on Risk Sharing:

Dr. Tariqullah Khan establish the principle *Al-Ghunm bil Ghurm* and argues that The current system provide guaranteed return (interest); that violates the important principle. As a consequence *Muharakah* and *Mudarabah* shares the entrepreneurial risk and creates a more equitable and stable system.

Asset Backing:

In Islamic finance asset must be backed from real services or tangible assets. This ensure that the finance does not become the speculative one and end in itself, as often happened in conventional one where credit is created for trading in complex derivatives or inflating asset bubbles.

Scholar's Perspective on Asset Backing:

Dr. Abbas Mirakhor argues that an asset backed monetary system directly ties the creation of money with the growth of real wealth in the economy. This will prevent the situation where financial markets inflates speculative bubbles independently; while the real economy lags behind. It is a system that designed to finance production and exchange.

CASE STUDY OF PAKISTAN'S ECONOMY: THE IMPACT OF FRACTIONAL RESERVE BANKING SYSTEM

The theoretical flaws of the fractional reserve banking system are not only academic abstractions, it can clearly shown from the economic trajectory of Pakistan. The country's continues struggle with debt, inflation, and boom-bust cycle can be directly linked with the mechanics of the system when private credit creation dominates the economy.

◆ The Government Debt Trap:

The most negative impact of this system on Pakistan is that the monetary sovereignty has been transferred to banking sector. Instead of creating debt-free money for public, government borrow it from banks by issuing treasury bonds and bills.

Commercial banks create money in order to buy treasury bonds and bills, and to earn risk-free and guaranteed return funded by the national treasury. As a result, a large portion of the annual federal budget is allocated to servicing the debt, rather than funding the sector like education, health and infrastructure.

Dr. Pervez Tahir (Former Chief Economist of Pakistan) repeatedly highlight how debt servicing is the largest expenditure of Pakistan, He argues that this system forces the government to borrow it even for its essential functions, and fixing a structural deficit into national deficit.

The State Bank of Pakistan (SBP) annual reports consistently shows how the banks assets largely share in the government securities. It is a system where the most profitable activity for banks is to lend to the state to interest, channeling resources away from the public goods

◆ The Financial Instability:

The fractional reserve banking system is inherently pro-cyclical.

During economic boom (e.g, the mid 2000's or the recent housing bubbles) banks increase credit for consumer financing and speculative real estate ventures. As noted by the economist, *Dr. Hafiz Pasha*, this shifts credit away from the manufacturing and export sector towards non-productive speculation. This weakens the country's long-term industrial foundation and export competitiveness in the long run. Easy loan and excessive borrowing creates falling demand inflating the prices of the assets to unsustainable level. This inevitably leads to market crash.

During an economic bust (e.g, post-2008 or during balance of payment crises) banks decrease lending and become risk-averse. This severe reduction in the availability of loan decreases business of working capital, leading to layoffs, reduced production and deepened recession. In this situation sometimes State bank of Pakistan (SBP) offers subsidized schemes but here is the problem, it can't force private banks to follow along. As private banks are businesses if they think if a loan is too risky or non-profitable enough they simply said "No" even if the government is helping.

◆ **The Inflation Problem:**

The State bank of Pakistan (SBP) struggles with continuing inflation is a direct result of its direct control of the money supply. Although the SBP sets the policy rate, the ultimate creation of money is done by commercial banks through lending.

Dr. Ashfaq Hasan Khan (Renowned Pakistani Economist) had created a link between excessive borrowing from the banking system and inflation. He states that in order to finance deficit, government borrows heavily from scheduled bank. It increases liquidity in the economy without a corresponding increase into goods and services, leading to a demand pull inflation. This process is the direct result of a monetary system that finances state spending through interest bearing debt through private entities rather than sovereign, debt free money.

◆ **Short Term Loan and Neglect of Productive Sectors:**

Various misallocation of credit occurs due to the profit motive inherent in the fractional reserve banking system. World Bank various reports on Pakistan shows that banks rely mostly on short term loans or financing such as consumer financing or government debt, rather than long-term, risky project financing for Small and Medium Enterprises (SME's) and agriculture.

This creates a financial gap on the sectors that create employment, innovation, and sustainable growth in the economy. This system is built in a way that rewards speculation and government consumption, not capital for productive enterprises.

Conclusion

The Pakistan economy faces the same issues that come from the modern banking system due to the fractional reserve banking system, like unsustainable public debt, inflation and a financial sector that serves itself at the expense of national development. The solutions for these problems are not set by providing short-term loans or cutting harsh spending, but in a re-evaluation of monetary architecture. A shift towards a system that controls the money creation to the public purpose like full-reserve banking system.

FULL RESERVE BANKING SYSTEM: A SOVEREIGN SOLUTION:

After establishing the profound failure of the fractional reserve banking system, it is essential to restructure our monetary architecture. The proposed alternative is not minor but a paradigm shift towards full-reserve banking system, often called sovereign money.

Defining Full Reserve Banking

Full reserve banking system is a monetary reform that ends the private creation of money and separate the payment system from lending system. Under this system, the power to create money is given solely to the sovereign state, while the commercial banks are reconstructed into two distinct type of institutions each with a clear and non-conflicting mandate.

The modern exposition of this model comes from “**The Chicago Plan Revisited**” in their seminal 2012 working paper. Economist *Jaromir Benes* and *Michael Kumhof* define and model this system, concluding

The Chicago Plan created a strict separation between the monetary and credit function of the banking system. In the fractional reserve banking system, all the money would be issued by the government. Lending and investment would be done by entirely different institution, these lenders would not create money. Instead they must raise funds upfront by selling shares or issuing long-term bonds, in order to make long-term risky investment (*Benes & Kumhof, IMF, 2012*).

This definition develops the main principles: the complete removal of interest, debt-based creation of the money supply. In this system money creation becomes the public utility and banks become a service of intermediary, not creation.

The Mechanism of Full Reserve Banking System

The operation of this banking system is the splitting of the current banking model.

● Transaction Bank:

Under this system, the transaction banks acts as a pure custodian and facilitator of the banking system. They are not allow to lend or to give loans, 100% of all demand deposits are backed by real reserves held as Central bank digital currency or cash. In other words banks reserve ratio (public money/current account) must be 100%. Banks would allow to charge only a transaction cost or account management fees.

Transaction banks are owned by private entities but they operate in a different way, and their core function is transformed. They act as a secure fee-based custodian of sovereign money, guaranteed by 100% reserves at central bank. It can be places into the essential infrastructure like electrical grid or water system, where profit is derived from services not speculation. This can be removed from realm of high finance.

● Investment Banks:

These institutions are the only provider of credit in the economy. They act as a true intermediary between savers and borrowers.

The banks only invest the money of those savers , who actually wants to invest their money and earn profit. They can invest it in the form of investment account, the banks pools money from different investors and then lend it in a business or project. If the business or a project can earn

profit the investor can earn profit according to the pre-agreed profit sharing ratio and if a business bears loss the investors can also bear loss. The return are generated through profit sharing (*Mudarabah*), equity (*Musharakah*) or service fees ,not from a pre-determined interest rate.

The Control of Central Bank:

Central bank regains the sovereignty of monetary policy. It has the sole authority to create new money, increase or decrease money supply, control inflation and to manage the macroeconomic cycle.

Mechanism of Full Reserve Banking System : A Numerical Illustration

Scenario:

Mr. A has Rs.100,000. He decided to allocate them:

- In saving account he places Rs. 60,000 to gain profit.
- In current account he places 40,000 to gain the access of liquidity.

Now, the bank action is as follows:

- Bank X (Transaction Account) takes Rs. 40,000 of the Mr. A and deposit full of Rs. 40,000 in the central bank as reserve.
- Bank Y (Saving Account) takes Rs. 60,000 of the Mr. A and invest them in a pool with other depositors.

Scenario (Government Financing):

Suppose, Government needs Rs.100,000 to build school. In this system, bank does not borrow it from the banks, instead central bank have the authority from the parliament to create Rs.100,000 debt-free sovereign money. It transfers into government account to finance the school. The money is spent into the real economy, and the money supply increases without the increase of the debt in the economy.

BALANCE SHEET OF REFORMED SYSTEM

The separation of money not only requires conceptual changes, it also requires some financial balance sheet changes. Taking out from the detailed work of *Andrew Jackson and Ban Dayson in Modernising Money (2012)*. These balance sheet tell us how money become a secure public record at the central bank, while credit becomes the matter of transparent investment intermediation.

Commercial Bank Balance Sheet

Commercial Bank Balance Sheet		Commercial Bank Customer Funds (held in custody)
<i>Assets</i>	<i>Liabilities</i>	
Loans outstanding	Investment accounts	Transaction accounts (records of the balances of individual customers as given above; funds actually held at Customer Funds Account at the central bank)
Cash	Borrowing from other banks	
Operational account		
Investment Pool account		
Property and fixed assets	Shareholder capital (equity)	

Commercial bank balance sheet and off-balance sheet records (Jackson and Dyson, 2012).

Key Changes:

- There is no cash or reserve on asset side against customer deposits and there is no line for customer transaction deposit on the liability side.
- The primary liability for funding loan is investment account. These represent real saving entrusted for the bank for lending, with the saver accepting risk.
- The investment pooled account is the new critical asset. It is the bank own ledger at the central bank holding the pooled funds from investment account, ready to be deployed as loans.

Central Bank Balance Sheet

Central Bank Balance Sheet		Central Bank Money Holdings (held in custody)
Assets	Liabilities	
Loans to banks	Foreign exchange bonds in issue	Customer Funds accounts
Securities (Gilts, Bonds, Foreign Currency, etc.)	All other liabilities	Operational accounts of banks
Balances at other central banks		Investment Pool accounts of banks
Bank of England's Operating Funds account		Central Government account
All other assets (property, etc.)		Central Bank's Operating Funds account
		Accounts for other central banks
		Accounts for major payment systems providers (if necessary)

Central bank balance sheet and off-balance sheet money holdings (Jackson and Dyson, 2012).

Key Changes

- Customer fund account is the heart of the realm. It is the account where all the public transaction money is held. It is the sovereign money, liability of the state, not of any commercial bank
- Central bank clearly separate the money for transaction (customer fund), for bank transaction, for credit intermediation (investment pool), and for government use.
- As the Jackson and Dyson note, *There are no central bank reserve in the present system.* It eliminates the traditional reserve. The fractional reserve banking system is replaced by a simple transparent custody system for sovereign money.

Definition of Money Supply Post Reform

As derived from the structure, the total money supply for spending is simply the sum of all "Customer Funds Accounts" at the central bank. This give the direct control of medium of exchange to the state.

Monetary Governance: Deciding the Right Amount of Money

The full reserve banking system answer the question differently of How much the money is created and on what basis?

In the Fractional reserve banking system the money creation is pro-cyclical and privatized. Commercial banks create money when they feel providing loan is profitable for them. The state feels re-actively trying to manage the consequences.

The full reserve banking system turns this logic. The power to create money is given solely to the state. This change money supply management from a reactive struggle into pro-active struggle. The process operate on two level:

- **Legislative Sovereignty:**

The main purpose of money creation is to fulfills public needs. As outlined in the modern monetary system, if government wants financing it only requires parliament approval, it does not borrow. It follows a transparent legislative process, like the “*Money Creation Bill*” central to the American Monetary act, the central bank is authorized to credit the state account with new, debt free sovereign money (*Positive money*, 2016; *Huber*,2017) . In this system money is spend directly to the real economy or public asset without creating public debt. The “*how much*” is determined by the projects the public wants and the real resources available to complete them.

- **Technocratic Economic Governance:**

In order to control the inflation, the total money management is controlled by the “*Monetary Creation Committee*” in the central bank. The stock of money grows with economy’s productive capacity, using direct tool. In the IMF paper of “*The Chicago Plan Revisited*” this system provides “exquisite control” over the money supply allowing the state to “*target a steady rate of inflation, or even zero inflation*” by directly creating or withdrawing base money (*Benes & Kumhof*, IMF, 2012, p. 4).

In this system the tools are direct; If the economy needs a boost and wants growth; then government spent money directly into the economy, on things like infrastructure and if the economy is overheating causing inflation then it can be controlled by raising taxes in order to maintain price stability (*van Dixhoorn*). As economist Joseph Huber explains that this shift establish money as a public utility where its volume is a matter of public management, not private profit (*Huber*,2017). Instead of money creation becomes the private profit, it becomes the public tool.

THE CHICAGO PLAN REVISITED: AN IMF BLUEPRINT FOR MONETARY REFORMATION:

The idea of moving towards full reserve banking system faces a big, practical question: Can it really works or not according to modern, globalized and complex economy? For a long time, the answer given is theoretical, it changes in 2012 when IMF give its paper of the research done by two economist *Jaromir Benes* and *Michael Kumhof* . They research basically on the full reserve model first formulated in 1930’s. Their conclusion create a much more stable economic system and solve major economic problems.

Historical Context and its Modern Modeling

The original Chicago plan was originated from the Great Depression. Economist like *Henry Simon* and *Irving Fisher* saw that during depression the private banks collapse and cause disaster, so they argued that we have to take power to create money from private banks and restored to government. Their main goal is to eliminate bank runs and cease the destabilizing credit cycle, as they saw as the main reason of depression.

Benes and Kumhof foundational work was to test 80-years-old idea with 21-century technology. They used a **Dynamic Stochastic Model** for analysis of modern central banking and IMF, they plugged the Chicago plan rules and this let them simulate if we switched to this system, and how the economy would run in long-term. This approach not only give theoretical arguments, it also allow to measure real variables like GDP growth, inflation, debt burden and financial stability under different economic shocks. The result from this model were clear and game changing. It shows that the result have powerful impact.

Four Major Benefits of this System

1. The Permanent Elimination of the Banking System

This model ends the system of the banking panics. The authors states that the Chicago Plan makes the banks run impossible (*Benes & Kumhof, 2012, p.30*). This is developed by the core structural change: 100% full reserve for all transaction (checking deposit). The destabilization of fractional reserve banking system is surgically removed, borrowing short from depositors to lend long. In this system, the payment is isolated from solvency risk of lending institutions.

2. Reduction of Private and Public Debt

The most important concern is debt. The model explains the transition mechanism itself create a powerful opportunity for debt liquidation. As the government create debt free money, it simultaneously extinguish the large portion of outstanding public debt. The authors quantify this, noting the plan that it can reduce the overall debt burden in the economy. (*p.5*)

Furthermore, the system fundamentally alters the dynamic of private debts. By removing the *ex-nihilo* (money creation power), credit expansion become constrained by saving in the investment sector. The model shows that this lead to a **permanent reduction in the debt-to-GDP ratio** breaking the cycle of economic growth is contingent on ever increasing debt. As summarized in the paper the economy shift towards the low debt and high equity environment. (*p.31*)

3. Smoothing Business Cycle

In the fractional reserve banking system the economic swings are worse. But in Chicago Plan this volatility is reduced. The control of money supply has been given to the sovereign Government. During recession it can inject money through public spending or direct transfer, and in inflationary boom it can reduced money supply through taxation. This model concludes this lead to significant decrease in the volatility of both inflation and output and create a more predictable and stable economy. (*p.32*)

4. Direct Control Over Inflation

The common fear of the current system is hyperinflation from unchecked state Printing. The IMF model *The Chicago Plan* has been given monetary authority “**Exquisite control**” over the money supply (*p.4*) . This direct control of money supply without the interference of the private banks allows policy makers to target a steady rate of inflation , or even zero inflation, without any need for any rigidities and inefficiencies of reserve requirements or capital adequacy ratios (*p.4*). Price

stability becomes an inherent goal, not a constant battle against the inherent elasticity of the privatized money supply.

A Non-Inflationary Path to a New System

The important part of the paper is “**HOW**” . It is a planned step-by-step legal change not an overnight shock. The government through central bank issues new sovereign money. This sovereign money will be given to commercial bank for lending on 100% reserve basis. Overtime banks return their loans through managing investment account and long-term saving accounts. This model demonstrate that the transition would not be inflationary because it is primarily a balance sheet restructuring that replaces one form of money (private bank liabilities) with another (sovereign money) without increasing aggregate demand.

Conclusion

“**The Chicago Plan revisited**” is a game changing study. The authors *Benes & Kumhof* proved from their research that the model of full reserve banking system is not just theoretical, they gave it a solid evidenced based foundation. Their work provides the backbone of the argument that we are not stuck on the current system boom and busts. Several big problems can be solved with the help of sovereign money like; ending too big-to-fail, free government from public trap, smooth out booms and busts, and keeps price stability. The paper is not taken out from a historical book; instead it is a modern, authoritative blueprint for building a financial system that is both stable and sovereign.

FULL RESERVE BANKING AND ISLAMIC FINANCE:

The IMF paper “**The Chicago Plan Revisited**” proved that the full reserve banking system can actually work. In order to see from another perspective we move towards the principle of Islamic finance. The alternative of the current banking system is present in Islamic financial law for centuries. The act of convergence suggest that call for monetary reform is not just technical; it's about building a financial system that is both stable and inherently just.

Fractional reserve banking system is structurally build upon both *Riba* and *Gharar* that is prohibited in Sharia'h. The proposed solution of full reserve banking system directly addresses these Islamic prohibition; embodying the principle of risk sharing and asset backing.

- **Eliminating *Ribā* from Money Creation:** By ending the private creation of money, it removes institutionalized Riba. The state creates debt-free money, and in investment sector the return is generated on profit sharing basis, not on a pre- determined interest rates.
- **Eliminating *Gharar* with 100% Reserve Backing:** In the full reserve banking system the transaction bank hold 100% reserve against demand deposit that eliminates the *Gharar* of the current system. The promise for liquidity becomes certain as the deposits are fully backed by sovereign money held at central bank
- **Promoting Risk Sharing and Asset Backing:** The investment banking system works almost similar to the Islamic Banks. They pool real saving and channelized them into different sectors of the economy through *Musharaka* and *Mudarabah* contract. This perfectly match with the core principle from Islamic tradition often summarized as “*Profit comes with the*

liability”(Sunan-al-Tirmidhi) ,ensuring that the partners shares both risk and rewards of enterprise

A Unifying Framework for Reform:

Both modern IMF paper and timeless ethical critique from Islam target the same weaknesses like; the injustice of rent seeking through money creation, and the instability of promises that cannot be kept. As scholar *Dr. Tariqullah Khan* argues that Islamic finance ties with the real asset to stop speculation and ensure fairness, the full reserve banking system does exactly this: investment is linked with the real saving, not created with the credit.

So, moving towards the full reserve banking system is the meeting point. The path is mapped by both the quantitative models of IMF and the moral and ethical compass of Islamic law. For Pakistan and other Muslim countries this is a great chance,they can lead to a financial reform that promises not to eliminate debt and stabilize the economy but to do in a manner that is moral and ethical compass with Islamic law. This reform is both practical and morally imperative.

OBJECTIONS, CHALLENGES & PRAGMATIC PATHWAYS

As we have established the empirical, ethical, and theoretical case of full reserve banking system. Now, there is a question arises: Is such changes is feasible or not? Criticism arises and their primary criticisms are; the switch can be messy and chaotic, and it give too much control of money to government. Addressing these concerns are important to move the proposal from blueprint to credible policy.

1. Objection: “It will Stifle Credit and Cripple Economic Growth”

This is the most common criticism. Critics argue that if banks does not create money there is a huge shortage of credit for business start-up or growth, which will hurt the economy.

Counter Argument

This objection misunderstood that the source of sustainable credit. The IMF Chicago Plan clearly contradicts this claim, showing that output become more stable, not stagnant (*Benes & Kumhof, 2012*). Loans does not vanish, it can be provided through real saving pooled in investment banks. Economist like John Kay argues that a financial system that channelized saving is more stable and better support long-term investment. He also argues that the current system is focused on “**transactional engineering**” rather than funding innovation (*Kay, 2015*). The full reserve banking model would shift the model towards more productive roles.

2. Objection: “It Grants Dangerous Inflationary Power to the State”

If the government prints money then the politician will just print the money to pay for everything, it will cause hyperinflation like in Weimar, Germany, or Zimbabwe

Counter Argument

In the current system private banks have the power to create money, which they do pro-cyclical, contributing to asset inflation.

According to *Van Dixhoorn*, during the shift the injection of sovereign money is a one time balance sheet operation, not a perpetual one tap. In full reserve banking system the power to create money is given to an independent Money creation committee, similar to how central bank set interest rate today, but more transparent.

The actual cause of hyperinflation happened in the history is the real economies collapsed; not due to the sovereign money creation. The greater risk lies in an unaccountable private creation of money.

3. Objection: “The transition would be Disruptively Complex”

Switching the core architecture of the global financial system is complex and risky.

Counter Argument

Proponent like *Jackson and Dayson (2012) in Modernising Money* provides step-by-step transition plan that would take several years. It will involve:

1. Legally separate everyday transaction with investment accounts.
2. Gradually raising reserve requirement of transaction account to 100%
3. The central bank would provide sovereign money to meet this requirement, which banks would repay overtime with investment arm profits.

This gradual phase approach allows the banks, businesses and people to adjust and avoids a “Big Bang shock” (*Positive money, 2016*). The 2008 financial crises demonstrate that if the government wants; they can execute massive, complex financial restructuring overnight.

4. Objection: “It’s Politically Impossible against the Banking lobby”

This is the biggest practical hurdle. The financial sectors earn immense profit from the current system. They would fight to stop this reform will all their power and influence.

Counter Argument

Its true that every big reform faced powerful opposition. All major social and economic reform, from ending slavery to creating a central bank were all once called impossible because powerful groups gain profit from an old way.

As *Prof. Steve Keen* political economist argues, the path is to educate and build a broad public movement. When people understands that they pay for banking crises, while reformed system offers them more stable money and lower national debt, political will grow. The 2008 crises itself created a detailed window of political possibility for important reform that was ultimately missed, proving that crises shift the over ton window (*Keen, 2017*).

Conclusion:

These objections are serious and we want solid answer for them. However they are not overwhelming. They need careful design, Stronger and transparent public rules, and a phased implementation. The greater risk is not changing a complex system, but paying for a system that whose catastrophic flaws are already known. The real question is not that we can manage a transition or not, but can we afford the even greater cost of keeping our broken one.

APPLYING FULL RESERVE BANKING TO PAKISTAN’S ECONOMIC CRISES:

The principle of monetary reform may seem abstract, but they offers more practical and real way out for the countries stuck in a debt and crises cycle. Pakistan economic profile represent the case of what’s broken with the fractional reserve banking system: unsustainable debt, fiscal helplessness and imported inflation. Switching the system towards the full reserve banking system would solve these problems. It gives the sovereign path to stability.

Pakistan Debt Burden

Mostly Pakistan's economy is defined by its debt; a direct result of monetary system that forces the government to borrow its own currency.

Domestic Debt: Pakistan domestic debt in 2024 is approximately Rs.40 trillion. The debt is largely composed of bonds and treasury bills held by commercial banks. In this mechanism banks create money from deposits in order to buy government bills and securities, the state pay them interest (over Rs.5 trillion annually), and consuming almost 50% of the tax revenues. This crowd out essential spending on health, education, and infrastructure.

Foreign Debt: Pakistan exceed \$1 billion foreign or external debt. For servicing this debt Pakistan consume larger portion of the country's foreign exchange and remittances, leading to a never ending balance of payment and dependence on IMF loans or bailouts with painful conditions.

As an IMF own research **The Chicago Plan** Revisited concludes that such an existence of a large outstanding stock of government debt is a direct result of the present monetary system. (*Benes & Kumhof, 2012*).

Transformation towards Full Reserve Banking System

A transformation towards full reserve banking system, tailored for Pakistan, would be categorize into three phases, directly covering all its weaknesses.

Phase 1: Debt liquidation and Monetary Reset:

By following the Chicago Plan, the SBP would authorize to issue debt-free sovereign money. With this base money following two simultaneous transformative action would be taken:

Convert all transaction deposit of commercial bank to 100% SBP backed reserves.

In order to repay the debt of the banking system government would use the part of the new money.

Impact:

- This would decrease the national debt.
- Eliminate the largest expense of the federal budget, paying interest on its debt.
- Inflation would be decrease as modeled by the IMF, because it replaces one form of money (bank debt-liabilities) with other sovereign money.
- The fiscal space would be created, trillions of rupees would be used for productive public investment rather than paying interest.

Phase 2: Building a Productive, Sovereign Credit System:

When the transaction system become secured, and the government debt decreases, then the focus shift to the real economy.

Sovereign financing for public goods

The government with the approval of parliament could use new debt-free sovereign money to finance national projects like; building dams for water and energy securities, modernizing the national rails and logistic centre, and investing in a green energy transition. This approach follow the proposal of Positive money (2016), the new money should be created for public benefit, not just for banks to earn profit.

Reorienting private credit

The newly form investment banks would be capitalized by real Pakistani saving (through investment accounts). The government directed the bank to prioritized some important sectors of the economy like; SME manufacturing, agriculture, and technology. This step follows the Islamic finance principle of asset-backing, ensuring credit fuels real production, not real-estate speculation.

Phase 3: Achieving Structural Stability and Monetary Sovereignty:

Controlling inflation directly and fairly

The SBP Monetary Creation Committee would have direct control of money supply. In order to control inflation, SBP use targeted tools, instead of interest rate. For example; the food prices rises. In order to off-set the prices, the government use new money to subsidized farm inputs or direct transfers to the vulnerable, while increasing taxes to take excess liquidity from other parts of the economy.

Ending the boom-bust cycle

The pro-cyclical credit bubbles hurts the Pakistan's economy, especially in real state and stock, would be mitigated. Credit growth would be tied with real saving, that prevents the runaway price bubbles in property and stock, leading to a more stable and predictable economy without sudden crashes.

Overcoming Challenges: The Pakistan's Context

The path is not without hurdles. The powerful banks fight this change, because they does not want to lose risk-free income from government securities. Dr. Parvez Tahir often argued as a national economic liberation project, breaking the debt trap that shackles the state's development potential. Furthermore the transition would require Strong anti-corruption to prevent the misuse of the new money and a strict commitment for using new money for productive purposes.

Conclusion of the Case Study:

For Pakistan, the full reserve banking system is not just a theory or an academic exercise. It is a real plan for existential economic reform. It offers a direct route to eliminate the debt trap, and build a financial system that serve the financial welfare rather than the balance sheet of intermediaries. The other choice for Pakistan is staying on the current path, means another 10 years of painful IMF bailout, budget cut, and wasted potential. It is a more riskier than changing a monetary sovereignty. The tools for Pakistan's economic redemption already exist, it need only courage to use them.

CONCLUSION:

Our exploration of money and banking has travelled from the abstract ledger of high finance to a harsh realities of a nation struggling under debt. We have describe the fractional reserve banking system and found it to be more than an economic mechanism, it is a political architecture of political servitude. This forces a government to beg for their own currency from private banks, transforms the citizens into a private debtors and keeps our economy nearer to crash.

The evidence of an important alternative is indisputable. Full reserve banking system is a full proof alternative. This is not a fantasy, it is a full proof plan tested and supported by IMF's own research.

Its principles not only with sound economics but it perfectly aligns with the Islamic principles, that promote real risk sharing and fairness instead of interest based profit.

As our case study for Pakistan reveals that this is not only an academic debate. It is a practical blueprint for national survival. The Rs.40 trillion domestic and \$130 external debt are not inevitable facts of life. They are the result of the private money creation. Switching to sovereign money offers direct path to liberate the budget from interest payments, to finance water, energy and infrastructure with debt-free capital, and to build a financial sector that funds factories instead of property speculation.

The greatest hurdle is not economic complexity, the blueprints by *Jackson & Dayson (2012)*, the transition model by *Benes and Kumhof (2012)* are clear. The greatest hurdle is to reclaim a stolen sovereign right. It is the courage to take power from the banks that profits from the public indebtedness. The true national security comes not from foreign loans but from monetary sovereignty.

We have two paths. One path continues the cycle of debt, austerity and instability. The other path requires a bold leap to redesign the whole system and to assert that money is a public utility not a private commodity. The choice is between the financial system that serve a narrow elite and one that serve the people; between continuous indebtedness and sovereign freedom.

The tools are available, but the question for Pakistan and other nations caught in a debt trap is Do we have the will to stop being tenants in our economy and finally take back the keys?

REFERENCES:

Al-Suwailem, S. (2014). Gharar and risk in Islamic finance. Islamic Research and Training Institute (IRTI).

Al-Tirmidhi, M. I. (9th century). Sunan al-Tirmidhi (Hadith collection).

American Monetary Institute. (2011). The American Monetary Act.

<https://www.monetary.org/american-monetary-act>

Bank of England. (2014). Money in the modern economy: An introduction. Quarterly Bulletin, Q1. <https://www.bankofengland.co.uk/quarterly-bulletin/2014/q1/money-in-the-modern-economy>

- Benes, J., & Kumhof, M. (2012). The Chicago Plan revisited (IMF Working Paper No. WP/12/202). International Monetary Fund.
<https://www.imf.org/external/pubs/ft/wp/2012/wp12202.pdf>
- Chapra, M. U. (1985). Towards a just monetary system. The Islamic Foundation.
- Fisher, I. (1935). 100% money. Adelphi Company.
- Huber, J. (2017). Sovereign money: Beyond reserve banking. Palgrave Macmillan.
- Husain, I. (2003). Pakistan: The economy of an elitist state. Oxford University Press.
- Iqbal, Z., & Mirakhor, A. (2011). An introduction to Islamic finance: Theory and practice (2nd ed.). Wiley.
- Jackson, A., & Dyson, B. (2012). Modernising money: Why our monetary system is broken and how it can be fixed. Positive Money.
- Kay, J. (2015). Other people's money: Masters of the universe or servants of the people? Profile Books.
- Keen, S. (2017). Can we avoid another financial crisis? Polity Press.
- Kemal, A. R. (2007). Debt accumulation and its implications for growth and poverty. The Pakistan Development Review, 46(4), 263–277.
- Khan, A. H. (2013). Inflation and debt dynamics in Pakistan [Various publications].
- Khan, M. A. (2013). What is wrong with Islamic economics? Analysing the present state and future agenda. Edward Elgar Publishing.
- Khan, M. F. (2013). Islamic banking and finance in the European Union: A challenge. Edward Elgar Publishing.
- Khan, T. (2010). Risk-sharing in Islamic finance: Principles and practices. Islamic Development Bank.
- Laina, P. (2015). Proposals for full-reserve banking: A historical survey from David Ricardo to Martin Wolf. Economic Thought, 4(2), 1–19.
- McLeay, M., Radia, A., & Thomas, R. (2014). Money creation in the modern economy. Bank of England Quarterly Bulletin, Q1, 14–27.
- Ministry of Finance, Government of Pakistan. (2024). Pakistan economic survey 2023–24. Islamabad. <https://www.finance.gov.pk/survey/chapters.html>
- Minsky, H. P. (1986). Stabilizing an unstable economy. Yale University Press.
- Mirakhor, A. (2010). Theoretical foundations of Islamic economics and finance. Edward Elgar.

- Muslim ibn al-Hajjaj. (9th century). Sahih Muslim (Hadith collection).
- Pasha, H. (2021). Economic challenges and reforms in Pakistan [Policy reports].
- Positive Money. (2016). A guide to sovereign money. https://positivemoney.org/wp-content/uploads/2016/02/SovereignMoneyCreation_Web.pdf
- Raworth, K. (2017). *Doughnut economics: Seven ways to think like a 21st-century economist*. Chelsea Green Publishing.
- Reinhart, C. M., & Rogoff, K. S. (2009). This time is different: Eight centuries of financial folly. Princeton University Press.
- Ryan-Collins, J., Greenham, T., Werner, R., & Jackson, A. (2011). Where does money come from? A guide to the UK monetary and banking system. New Economics Foundation.
- Sandel, M. J. (2012). What money can't buy: The moral limits of markets. Farrar, Straus and Giroux.
- Siddiqi, M. N. (2004). Riba, bank interest and the rationale of its prohibition. Islamic Research and Training Institute.
- Siddiqi, M. N. (2006). Islamic banking and finance in theory and practice: A survey of state of the art. Islamic Economic Studies, 13(2), 1–48.
- State Bank of Pakistan. (2023). Annual report 2022–23. Karachi. <https://www.sbp.org.pk/reports/annual/arFY23/index.htm>
- State Bank of Pakistan. (2023). Financial stability review. SBP Publications.
- Stiglitz, J. E. (2016). The euro: How a common currency threatens the future of Europe. W.W. Norton & Company.
- Tahir, P. (2019). Fiscal policy and public debt in Pakistan [Academic papers].
- The Quran. (Various translations). Surah Al-Baqarah (2:275–279), Surah Al-‘Imran (3:130), Surah An-Nisa (4:161).
- Tooze, A. (2018). Crashed: How a decade of financial crises changed the world. Viking.
- Turner, A. (2015). Between debt and the devil: Money, credit, and fixing global finance. Princeton University Press.
- Usmani, M. T. (2002). An introduction to Islamic finance. Kluwer Law International.
- van Dixhoorn, C. (2013). Full reserve banking: An analysis of four monetary reform plans. Sustainable Finance Lab. <https://sustainablefinancelab.nl/wp-content/uploads/sites/334/2019/02/Full-Reserve-Banking-Dixhoorn-SFL.pdf>

Werner, R. A. (2014). Can banks individually create money out of nothing? — The theories and the empirical evidence. *International Review of Financial Analysis*, 36, 1–19.
<https://doi.org/10.1016/j.irfa.2014.07.015>

World Bank. (2022). Pakistan development update: The economy and reform priorities. World Bank Group.

Zaman, A. (2012). Islamic economics: A survey of the literature. *International Journal of Economics, Management and Accounting*, 20(2), 1–32.