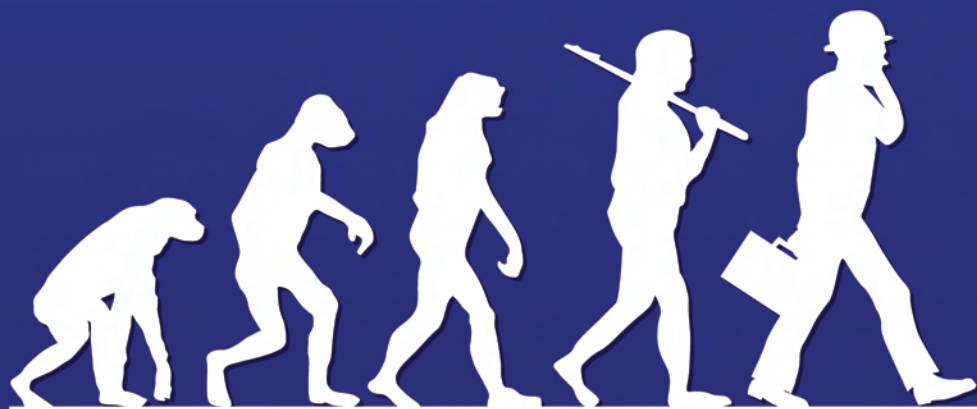


ANDREW JACKSON & BEN DYSON

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# MODERNISING MONEY

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WHY OUR MONETARY SYSTEM IS BROKEN  
AND HOW IT CAN BE FIXED

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WITH A FOREWORD BY **PROFESSOR HERMAN E DALY**

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# FOREWORD

Money ranks with fire and the wheel as an invention without which the modern world would be unimaginable. Unfortunately, out-of-control money now injures more people than both out-of-control fires and wheels. Loss of control stems from the privilege enjoyed by the private banking sector of creating money from nothing and lending it at interest in the form of demand deposits. This power derives from the current design of the banking system, and can be corrected by moving to a system where new money can only be created by a public body, working in the public interest.

This is simple to state, but difficult to bring about. Andrew Jackson and Ben Dyson do a fine job of explaining the malfunctioning present banking system, and showing the clear institutional reforms necessary for a sound monetary system. The main ideas go back to the leading economic thinkers of 50 to 75 years ago, including Irving Fisher, Frank Knight and Frederick Soddy. This book revives and modernises these ideas, and shows with clarity and in detail why they must be a key part of economic reform today.

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# SUMMARY OF KEY POINTS

## CHAPTER 1: A SHORT HISTORY OF MONEY

When early-day goldsmiths started to provide banking services to members of the public, they would issue depositors with paper receipts. These receipts started to circulate in the economy, being used in place of metal money and becoming a form of paper money. In 1844 the government prohibited the issuance of this paper money by any institution other than the Bank of England, returning the power to create money to the state. However, the failure to include bank deposits in the 1844 legislation allowed banks to continue to create a close substitute for money, in the form of accounting entries that could be used to make payments to others via cheque. The rise of electronic means of payment (debit cards and internet banking) has made these accounting entries more convenient to use as money than physical cash. As a result, today bank deposits now make up the vast majority of the money in the economy.

## CHAPTER 2: THE CURRENT MONETARY SYSTEM

The vast majority of money today is created not by the state, as most would assume, but by the private, commercial (or high-street) banking sector. Over 97% of money exists in the form of bank deposits (the accounting liabilities of banks), which are created when banks make loans or buy assets. We explain how this process takes place and show the (simplified) accounting that enables banks to create money. We also look at the crucial role of central bank reserves (money created by the Bank of England) in the payments system, and explain why it is that banks do not need deposits from savers or central bank reserves in order to lend.

## **CHAPTER 3: WHAT DETERMINES THE MONEY SUPPLY?**

With most money being created by banks making loans, the level of bank lending determines the money supply. What determines how much banks can lend? The demand for credit (lending) will always tend to be high due to: insufficient wealth, the desire to speculate (including on house prices), and various legal incentives.

The supply of credit depends on the extent to which banks are incentivised to lend. During benign economic conditions banks are incentivised to lend as much as possible – creating money in the process – by the drive to maximise profit, and this process is exacerbated through the existence of securitisation, deposit insurance, externalities and competition. The regulatory factors that are meant to limit the creation of money such as capital requirements, reserve ratios and the setting of interest rates by the Monetary Policy Committee are for a variety of reasons ineffective.

Yet despite the high demand for credit, the strong incentives for banks to create money through lending, and the limited constraints on their ability to do so, banks do not simply lend to everyone who wants to borrow. Instead, they ration their lending. For this reason, the level of bank lending, and therefore the money supply, is determined mainly by their willingness to lend, which depends on the confidence they have in the health of the economy.

## **CHAPTER 4: ECONOMIC CONSEQUENCES OF THE CURRENT SYSTEM**

The economic effects of money creation depend on how that money is used. If newly created money is used to increase the productive capacity of the economy, the effect is unlikely to be inflationary. However, banks currently direct the vast majority of their lending towards non-productive investment, such as mortgage lending and speculation in financial markets. This does not increase the productive capacity of the economy, and instead simply causes prices in these markets to rise, drawing in speculators, leading to more lending, higher prices, and so on in a self-reinforcing process. This is known as an asset price bubble.

While the increases in asset prices and the money supply may create the impression of a healthy, growing economy, this ‘boom’ is in fact fuelled by

an increasing build-up of debt (since all increases in the money supply are a result of increases in borrowing). The current monetary system therefore sows the seeds of its own destruction – households and businesses cannot take on ever-increasing levels of debt, and when either start to default on loans, it can cause a chain reaction that leads to a banking crisis, a wider financial crisis, and an economy-wide recession.

Financial crises therefore come about as a result of banks' lending activities. As Adair Turner, head of the UK's Financial Services Authority, puts it: "The financial crisis of 2007/08 occurred because we failed to constrain the private financial system's creation of private credit and money." (2012) The boom-bust cycle is also caused by banks' credit creation activities.

Some measures implemented to dampen or mitigate against these effects have the perverse effect of actually making a crisis more likely. Deposit insurance, for example, is intended to make the banking system safer but in reality enables banks to take higher risks without being scrutinised by their customers. The Basel Capital Accords, again designed to make the system safer, gives banks incentives to choose mortgage lending over lending to businesses, making asset price bubbles and the resulting crises more rather than less likely.

## **CHAPTER 5: SOCIAL AND ENVIRONMENTAL IMPACTS OF THE CURRENT SYSTEM**

Much of the money created by the banking system is directed into housing, causing house prices to rise faster than the rise in salaries. As well as making housing unaffordable for those who were not on the housing ladder before prices started to rise, it also leads to a large number of people using property as an alternative to other forms of pension or retirement savings, without them realising the rising prices are artificially fuelled by the rise in mortgage lending and money supply.

The fact that our money is issued as debt means that the level of debt must be higher than it otherwise would be. The interest that must be paid on this debt results in a transfer of wealth from the bottom 90% of the population (by income) to the top 10%, exacerbating inequality. In addition, any attempt by the public to pay down its debts will result in a shrinking of the money supply, usually leading to recession and making it difficult to continue reducing debt.

The state currently earns a profit, known as seigniorage, from the creation of bank notes. However, because it has left the creation of electronic money in the hands of the banking sector, it is the banks that earn a form of seigniorage on 97% of the money supply. This is a significant and hidden subsidy to the banking sector, and the loss of this seigniorage requires that higher taxes are levied on the population.

The instability caused by the monetary system harms the environment. The burden of servicing an inflated level of debt creates a drive for constant growth, even when that growth is harmful to the environment and has limited social benefit. When the inevitable recessions occur, regulations protecting the environment are often discarded, as is longer-term thinking with regards to the changes that need to be made. In addition, there is little control over what banks invest in, meaning that they often opt for environmentally harmful projects over longer-term beneficial investments.

Finally, the current monetary system places incredible power in the hands of banks that have no responsibility or accountability to society. The amount of money created by the banking sector give it more power to shape the economy than the whole of our elected government, yet there is very little understanding of this power. This is a significant democratic deficit.

## **CHAPTER 6: PREVENTING BANKS FROM CREATING MONEY**

It is possible to remove the ability of banks to create money with a few relatively minor changes to the way they do business. This will ensure that bank lending will actually transfer pre-existing money from savers to borrowers, rather than creating new money.

From the perspective of bank customers, little will change, except for the fact that they will have a clear choice between having their money kept safe, available on demand, but earning no interest, or having it placed at risk for a fixed or minimum period of time in order to earn interest.

The specific changes made to the structure of banking make it possible for banks to be allowed to fail, with no impact on the payments system or on customers who opted to keep their money safe.

## **CHAPTER 7: THE NEW PROCESS FOR CREATING NEW MONEY**

With banks no longer creating money, an independent but accountable public body, known as the Money Creation Committee (MCC), would instead create money. The MCC would only be able to create money if inflation was low and stable. Newly created money would be injected into the economy through one of five methods, four of which are: a) government spending, b) cutting taxes, c) direct payments to citizens or d) paying down the national debt. Which of these methods is used to distribute new money into the economy is ultimately a political decision.

Ensuring that businesses are provided with adequate credit is always a concern whenever changes are made to the way that banks operate. However, rather than resulting in a damaging fall in the credit provided to businesses, the reforms ensure that the Bank of England has a mechanism to provide funds to banks that can only be used for lending to productive businesses. This fifth method of injecting money into the economy is likely to boost investment in the real economy and business sector above its current level.

## **CHAPTER 8: MAKING THE TRANSITION**

The transition from the current monetary system to the reformed system is made in two distinct stages: 1) an overnight switchover, when the new rules and processes governing money creation and bank lending take place, and 2) a longer transition period, of around 10-20 years, as the economy recovers from the 'hangover' of debt from the current monetary system. Changes are made to the balance sheets of the Bank of England and commercial banks, and additional measures are taken to ensure that banks have adequate funds to lend immediately after the switchover so that there is no risk of a temporary credit crunch (however unlikely). The changes can be made without altering the quantity of money in circulation.

The longer-term transition allows for a significant reduction in personal and household debt, as new money is injected into the economy and existing loan repayments to banks are recycled into the economy as debt-free money. The potential de-leveraging of the banking sector could be in excess of £1 trillion.

## **CHAPTER 9: UNDERSTANDING THE IMPACTS OF THE REFORMS**

In the reformed system money enters circulation in one of five ways, with each method having different economic effects. As in the current monetary system, money that increases productivity will be non-inflationary, while new money that does not increase productivity will be inflationary. Because banks will no longer create new money when they make loans, lending for productive purposes will be disinflationary, while lending for consumer purchases will have no economic effect. As such the Bank of England will have to closely monitor the lending activities of banks when deciding how much new money to inject into the economy.

Lending for the purchase of property or financial assets would be self-correcting, in so much as the economy is less able to sustain asset price bubbles. As a result financial instability would be reduced, while the effect of bank failures or deflation is much milder than is currently the case, due to money no longer being created with a corresponding debt.

As money is created without a corresponding debt, individuals are able to pay down their debts without contracting the money supply. Likewise the government gains an additional source of revenue, reducing both the need for taxes and the borrowing requirement. Many of the negative environmental impacts of the current monetary system are lessened in line with the reduction of the boom-bust cycle. In particular, the pressure to remove environmental regulation in downturns is reduced as is the constant need to grow in order to service debt. Likewise, the directed nature of Investment Accounts means the investment priorities of banks start to reflect the investment priorities of society. This also has positive effects on democracy by reducing the power of the banks to shape society in their own interests. Finally, the reformed system ensures that the creation of money is both transparent and accountable to parliament.

## **CHAPTER 10: IMPACTS ON THE BANKING SECTOR**

With money no longer issued when banks make loans or buy assets, deleveraging of the economy becomes possible. As the level of debt falls, the banking sector's balance sheet will shrink. Because banks can now be allowed to fail,

the 'too big to fail' subsidies for large banks disappear. However, at the same time it becomes much easier for banks to manage their cashflow (because all investments are made for fixed time periods or have notice periods), and regulations such as the Basel Capital Accords could be simplified when applied to the reformed banking system. An effect of the accounting changes made during the transition period is that the 'liquidity gap' that is endemic to modern banking would be significantly reduced, making banks much safer in liquidity terms.

The reforms mean that the central bank would have direct control over the money supply, rather than having to indirectly control it through interest rates. As interest rates would be set by the markets, the central bank would no longer need to play this role.

From an international perspective, there are no practical implications with regards to how the monetary system connects to those of other countries, and international trade and finance can continue as normal. With regards to exchange rates between sterling and other currencies, the common fear that sterling would be attacked and devalued is misguided; the greater risk is that the currency would appreciate. However, the design of the reformed monetary system ensures that large changes in exchange rates are self-balancing. Finally, the reforms have advantages for national security, by making the payments system more robust.

## CONCLUSION

There are very real challenges facing the world over the next few decades, including likely crises in food production, climate, energy, and natural resources (including water). To focus on dealing with these extreme challenges, it is essential that we have a stable monetary system and are not distracted by crises that are inevitable in the current monetary system. The monetary system, being man-made and little more than a collection of rules and computer systems, is easy to fix, once the political will is there and opposition from vested interests is overcome. The real challenges of how to provide for a growing global population, a changing climate, and increasingly scarce natural resources, require a monetary system that works for society and the economy as a whole. For that reason, our current monetary system is no longer fit for purpose and must be reformed.

# INTRODUCTION

*“Of all the many ways of organising banking, the worst is the one we have today.”*

**SIR MERVYN KING**

**Governor of the Bank of England, 2003 - 2013**

**October 25th 2010**

After the experience of the last few years, few people would disagree with Mervyn King's claim above. The 2007-08 financial crisis led to massive increases in unemployment and cuts to public services as governments around the world were forced to bail out failing banks. While the complete collapse of the financial system may have been averted, six years later the countries at the centre of the crisis have still not recovered. In economic terms the permanent loss to the world economy has been estimated at a staggering \$60 - \$200 trillion, between one and three years of global production. For the UK the figures are between £1.8 and £7.4 trillion (Haldane, 2010).

Yet while the 2007/08 crisis was undoubtedly a surprise to many, it would be wrong to think that banking crises are somehow rare events. In the UK there has been a banking crisis on average once every 15 years since 1945 (Reinhart and Rogoff, 2009), whilst worldwide there have been 147 banking crises between 1970 and 2011 (Laeven and Valencia, 2012).

It seems clear that our banking system is fundamentally dysfunctional, yet for all the millions of words of analysis in the press and financial papers, very little has been written about the real reasons for why this is the case. Although there are many problems with banking, the underlying issue is that successive governments have ceded the responsibility of creating new money to banks.

Today, almost all of the money used by people and businesses across the world is created not by the state or central banks (such as the Bank of England), but by the private banking sector. Banks create new money, in the form of



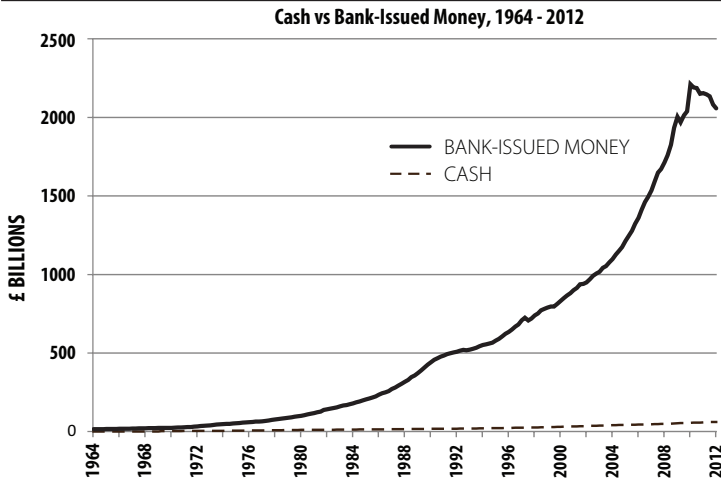
the numbers (deposits) that appear in bank accounts, through the accounting process used when they make loans. In the words of Sir Mervyn King, Governor of the Bank of England from 2003-2013, “When banks extend loans to their customers, they create money by crediting their customers’ accounts.” (2012) Conversely, when people use those deposits to repay loans, the process is reversed and money effectively disappears from the economy.

Allowing money to be created in this way affects us all. The current monetary system is the reason we have such a pronounced and destructive cycle of boom and bust, and it is the reason that individuals, businesses and governments are overburdened with debt.

When banks feel confident and are willing to lend, new money is created. Banks profit from the interest they charge on loans, and therefore incentivise their staff to make loans (and create money) through bonuses, commissions and other incentive schemes. These loans tend to be disproportionately allocated towards the financial and property markets as a result of banks’ preference for lending against collateral. As a result our economy has become skewed towards property bubbles and speculation, while the public has become buried under a mountain of debt. When the burden of debt becomes too much for some borrowers, they default on their loans, putting the solvency of their banks at risk. Worried about the state of the economy and the ability of individuals and businesses to repay their loans, all banks reduce their lending, harming businesses across the economy.

When banks make new loans at a slower rate than the rate at which their old loans are repaid, the money supply starts to shrink. This restriction in the money supply causes the economy to slow down, leading to job losses, bankruptcies and defaults on debt, which lead to further losses for the banks, which react by restricting their lending even further. This downward spiral continues until the banks eventually regain their ‘confidence’ and start creating new money again by increasing their lending.

We have no hope of living in a stable economy while the money supply - the foundation of our economy - depends entirely on the lending activities of banks that are chasing short-term profits. While the Bank of England maintains that it has the process of money creation under control, a quick glance at the growth of the bank-issued money supply over the last 40 years (shown opposite) calls this claim into question.

*Cash vs bank-issued money, 1964-2012*

By ceding the power to create money to banks – private sector corporations – the state has built instability into the economy, since the incentives facing banks guarantee that they will create too much money (and debt) until the financial system becomes unstable. This is a view recently vindicated by the chairman of the UK’s Financial Services Authority, Lord (Adair) Turner, who stated that: “The financial crisis of 2007/08 occurred because we failed to constrain the private financial system’s creation of private credit and money” (2012).

Yet if this instability in the money supply weren’t enough of a problem, newly created money is accompanied by an equivalent amount of debt. It is therefore extremely difficult to reduce the overall burden of personal and household debt when any attempt to pay it down leads to a reduction in the money supply, which may in turn lead to a recession.

The years following the recent financial crisis have clearly shown that we have a dysfunctional banking system. However, the problem runs deeper than bad banking practice. It is not just the structures, governance, culture or the size of banks that are the problem; it is that banks are responsible for creating the nation’s money supply. It is this process of creating and allocating new money that needs fundamental and urgent reform.

This book explores how the monetary system could be changed to work better for businesses, households, society and the environment, and lays out a workable, detailed and effective plan for such a reform.

## OUR PROPOSED REFORMS

We have little hope of living in a stable and prosperous economy while the money supply depends entirely on the lending activities of banks chasing short-term profits. Attempt to regulate the current monetary system are unlikely to be successful – as economist Hyman Minsky argued, stability itself is destabilising. Indeed, financial crises are a common feature of financial history, regardless of the country, government, or economic policies in place: Crises have occurred in rich and poor countries, under fixed and flexible exchange rate regimes, gold standards and pure fiat money systems, as well as a huge variety of regulatory regimes. Pretty much the only common denominator in all these systems is that the banks have been the creators of the money supply. As Reinhart and Rogoff (2009) put it:

“Throughout history, rich and poor countries alike have been lending, borrowing, crashing -- and recovering -- their way through an extraordinary range of financial crises. Each time, the experts have chimed, 'this time is different', claiming that the old rules of valuation no longer apply and that the new situation bears little similarity to past disasters.”

Rather than attempt to regulate the current monetary system, instead it is the fundamental method of issuing and allocating money that needs to change. These proposals are based on plans initially put forward by Frederick Soddy in the 1920s, and then subsequently by Irving Fisher and Henry Simons in the aftermath of the Great Depression. Different variations of these ideas have since been proposed by Nobel Prize winners including Milton Friedman (1960), and James Tobin (1987), as well as eminent economists Laurence Kotlikoff (2010) and John Kay (2009). Most recently, a working paper by economists at the International Monetary Fund modelled Irving Fisher's original proposal and found “strong support” for all of its claimed benefits (Benes & Kumhof, 2012).

While inspired by Irving Fisher's original work and variants on it, the proposals in this book have some significant differences. Our starting point has been the work of Joseph Huber and James Robertson in their book *Creating New Money* (2000), which updated and modified Fisher's proposals to take account of the fact that money, the payments system and banking in general is now electronic, rather than paper-based. This book develops these ideas even further, strengthening the proposal in response to feedback and criticism from a wide range of people.

There are four main objectives of the reforms outlined in this book:

1. **To create a stable money supply based on the needs of the economy.**  
Currently money is created by banks when they make loans, driven by the drive to maximise their profit. Under our proposals, the money supply would be increased or decreased by an independent public body, accountable to Parliament, in response to the levels of inflation, unemployment and growth in the economy. This would protect the economy from credit bubbles and crunches, and limit monetary sources of inflation.
2. **To reduce the burden of personal, household and government debt.**  
New money would be created free of any corresponding debt, and spent into the economy to replace the outstanding stock of debt-based money that has been issued by banks. By directing new money towards the roots of the economy - the high street and the real (non-financial) economy - we can allow ordinary people to pay down the debts that have been built up under the current monetary system.
3. **To re-align risk and reward.** Currently the government (and therefore the UK taxpayer) promises to repay customers up to £85,000 of any deposits they hold at a bank that fails. This means that banks can make risky investments and reap the rewards if they go well, but be confident of a bail out if their investments go badly. Our proposals will ensure that those individuals that want to keep their money safe can do so, at no risk, while those that wish to make a return will take both the upside and downside of any risk taking. This should encourage more responsible risk taking.
4. **To provide a structure of banking that allows banks to fail,** no matter their size. With the current structure of banking no large bank can be permitted to fail, as to do so would create economic chaos. Simple changes outlined in this book would ensure that banks could be liquidated while ensuring that customers would keep access to their current account money at all times. The changes outlined actually reduce the likelihood of bank failure, providing additional protection for savers.

In order to achieve these aims, the key element of the reforms is to remove the ability of banks to create new money (in the form of bank deposits) when they issue loans. The simplest way to do this is to require banks to make a clear distinction between bank accounts where they promise to repay the customer

‘on demand’ or with instant access, and other accounts where the customer consciously requests their funds to be placed at risk and invested. Current accounts are then converted into state-issued electronic currency, rather than being promises to pay from a bank, and the payments system is functionally separated from the lending side of a bank’s business. The act of lending would then involve transferring state-issued electronic currency from savers to borrowers. Banks would become money brokers, rather than money creators, and the money supply would be stable regardless of whether banks are currently expanding or contracting their lending.

Taken together, the reforms end the practice of ‘fractional reserve banking’, a slightly inaccurate term used to describe a banking system where banks promise to repay all customers on demand despite being unable to do so. In late 2010 Mervyn King discussed such ideas in a speech:

“A more fundamental, example [of reform] would be to divorce the payment system from risky lending activity – that is to prevent fractional reserve banking ... In essence these proposals recognise that if banks undertake risky activities then it is highly dangerous to allow such ‘gambling’ to take place on the same balance sheet as is used to support the payments system, and other crucial parts of the financial infrastructure. And eliminating fractional reserve banking explicitly recognises that the pretence that risk-free deposits can be supported by risky assets is alchemy. If there is a need for genuinely safe deposits the only way they can be provided, while ensuring costs and benefits are fully aligned, is to insist such deposits do not coexist with risky assets.” (King, 2010)

After describing the current system as requiring a belief in ‘financial alchemy’, King went on to say that, “For a society to base its financial system on alchemy is a poor advertisement for its rationality.” Indeed, over the next few chapters we expect readers to find themselves questioning the sanity of our existing monetary system.

# CHAPTER 1

## A SHORT HISTORY OF MONEY

In this chapter we outline a brief history of money and banking. We start by looking at the textbook history of the origins of money, before examining the alternative accounts of historians and anthropologists, which contradict the textbook history. We then discuss the development of banking in the United Kingdom and its evolution up to the present day.

### 1.1 THE ORIGINS OF MONEY

#### **A textbook history**

The standard theory of the origins of money, commonly found in economics textbooks, was perhaps first put forward by Aristotle (in “Politics”) and restated by Adam Smith in his book “The Wealth of Nations” (1776). According to Smith’s story, money emerged naturally with the division of labour, as individuals found themselves without many of the necessities they required but at the same time an excess of their own produce. Without a means of exchange individuals had to resort to barter in order to trade, which was problematic as both sides of the deal had to have something the other person wanted (the “double coincidence of wants”). To avoid this inconvenience people began to accept certain types of commodities for their goods and services. These commodities tended to have two specific characteristics. First, the majority of people had to find them valuable, so that they would accept them in exchange for their goods or services. Secondly, these goods had to be easily divisible into smaller units in order to make payments of varying amounts. It is suggested that as metal satisfied both requirements, it naturally emerged as currency. However, metal had to be weighed and checked for purity every

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# CHAPTER 2

## THE CURRENT MONETARY SYSTEM

In this chapter we build up an understanding of the monetary system. We start by looking at the modern banking system, focussing on the role of the two key players: commercial (high street) banks, and the central bank (the Bank of England). We explain the fundamental business model of a modern bank and then look at the mechanics by which commercial banks create (and destroy) money and central banks create (and destroy) central bank reserves and cash. This chapter provides enough knowledge of the existing banking system to understand the analysis that follows in the rest of the book. However, for those who would like a much more in-depth understanding of the modern monetary system, the book *Where Does Money Come From?* published by the New Economics Foundation is very highly recommended.

### 2.1 COMMERCIAL (HIGH-STREET) BANKS

The banks that most of us use today are referred to as commercial banks or high-street banks. They perform a number of practical functions:

**They make loans.** This could be seen as the *raison d'être* of modern banking. It is by making loans that they expand and generate the bulk of their profits.

**They allow customers to make electronic payments** between each other through electronic funds transfers (accessed by internet or telephone banking) or via the use of debit cards.

**They provide physical cash** to customers either through bank branches or via ATM cash machines.

**They accept deposits.** This is the role most of us associate banks with, from our first childhood experiences of putting money 'in the bank'.

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# CHAPTER 3

## WHAT DETERMINES THE MONEY SUPPLY?

In the previous chapter we saw that banks create money, in the form of bank deposits, when they make loans and buy assets. In this chapter we discuss the incentives banks have for creating money in this way, as well as looking at the restrictions and regulations that prevent them from doing so.

We begin by looking at what determines the demand for bank loans, concluding that as a result of the distribution of wealth, the desire to speculate, and the effect of various laws, the demand for credit will almost always be very high. The demand for money is also discussed, as is the effect on the economy of any attempt to pay down debts in aggregate.

Second, we will look at the incentives facing banks: given the high demand for credit, why do banks not simply lend to every individual or business that applies for a loan? We will see that due to the profit motive, financial innovations and some other institutional quirks, banks will attempt to lend as much as they can as long as it is profitable for them to do so.

Third, we will look at the reaction of the regulators. Faced with a banking sector that has a huge number of willing borrowers and an incentive to lend to them, in the current institutional structure, is it possible to temper banks' natural desire to create credit? We will conclude that despite the wide variety of tools available, none are particularly effective, and thus banks are relatively unconstrained in their ability to create credit. The main determinant of bank lending, and therefore the money supply, will be found to be the desire and willingness of banks to lend, which in turn will rest on their confidence in the wider economy, the profitability of lending and the likelihood that loans will be repaid.

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# CHAPTER 4

## ECONOMIC CONSEQUENCES OF THE CURRENT SYSTEM

Chapter 2 discussed the mechanics of bank lending, showing that when a bank makes a loan it increases both the broad money supply and the level of debt in the economy. Chapter 3 showed that banks profit from making loans, that the demand for credit tends to be very high, and that banks face little constraint on their ability to lend. Consequently, in the current monetary system it is the commercial banks, rather than the central bank, which determine both the quantity of money and debt in the economy, as well as the first use of newly created money.

In this chapter we analyse the economic effects of such a monetary system. For non-economists this chapter may be the most challenging, although we have attempted to convey the theories as simply and with as little jargon as possible. Some readers may wish to skip to Chapter 5 and return to this chapter after reading the rest of the book.

We begin by looking at the short-run impact of bank lending, distinguishing between lending to the 'productive' and 'non-productive' sectors of the economy. Particular attention is paid to the effect of money created (via bank lending) to fund purchases of financial assets, in contrast to the effect of money created to invest in businesses that contribute to GDP. We also consider the links between asset and consumer price inflation.

The longer-run dynamic effects of bank lending on the economy are then discussed with reference to Hyman Minsky's 'Financial Instability Hypothesis'. Minsky's theory explores the role of the financial sector in driving the boom-bust cycle, financial crises and debt deflation, showing that in the long term stability is itself destabilising. Evidence for Minsky's theories will also be examined.

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# CHAPTER 5

## SOCIAL AND ENVIRONMENTAL IMPACTS OF THE CURRENT MONETARY SYSTEM

The previous chapter discussed the economic effects of the current monetary system, showing how through its normal functioning it could lead to booms, busts, and occasionally financial crises and depressions. In this chapter we will address some of the other impacts of the monetary system. In particular, we will look at the effect of the monetary system on inequality, public and private debt, the environment and the level of democracy.

### 5.1 INEQUALITY

The current economic system depends on an adequate supply of money being available for transactions between households, businesses and government. However, as section 3.2 showed, for there to be a supply of money, some people must be in debt. Even the small amount of cash money which is not created by the commercial banking sector can only enter the economy in exchange for bank deposits. Consequently, in effect the non-bank sector must 'rent' the entire money supply from commercial banks, resulting in a constant transfer of wealth from the rest of the economy to the banking sector (through interest payments).

In the UK the money supply currently stands at approximately £2 trillion. Assuming an average interest rate of 8% on bank loans, in order to keep the money supply at a constant level requires the non-bank sector to transfer £160

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# CHAPTER 6

## PREVENTING BANKS FROM CREATING MONEY

Part One of this book critically examined the current monetary system. Chapters 1-2 began with a brief history of money and banking, before moving on to discuss the mechanics of the current system. In particular we saw that banks create money when they make loans. Chapter 3 looked at what determines the demand and supply of credit, concluding that the high demand for credit combined with ineffective regulations leaves the determination of the money supply in the hands of the banks. Chapters 4 and 5 asked, given the structure of the current monetary system, what is the likely result? The normal functioning of such a system was shown to result in periodic booms, busts, and occasionally financial crises, depressions and even debt deflations, as well as serious consequences for growth, unemployment, investment, house prices, public and private debts, inequality, the environment, and democracy. With such a wide array of negative consequences, we feel obliged to ask the question first put forward by Mervyn King - of all the ways of organising money and banking, is the best really the one we have today?

In the second part of this book we describe an alternative monetary system that we believe addresses many of the weaknesses of the system we have today. Chapters 6-8 outline how the reformed banking and monetary system would work, contrasting this against the existing system, while Chapters 9-10 explain the impacts of the reformed system. In this sense the second part of this book parallels the first part: Chapters 6-8 correspond to Chapters 1-3, with Chapters 9-10 corresponding to Chapters 4-5.

In this chapter the new monetary system is introduced, beginning with the different types of account available to customers and the new accounts at the central bank. A description of the mechanics of how banks will make loans

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# CHAPTER 7

## THE NEW PROCESS FOR CREATING MONEY

After the reform, banks would no longer be able to create money – in the form of bank deposits – when they made loans or bought financial assets. As a result, an alternative method for injecting money into the economy will be required. However, before we address the question of how new money is to be created, we first must address the questions:

1. Who should decide how much new money is to be created?
2. Who should decide how that money is to be used?

We will now look at both of these questions in detail.

### **7.1 WHO SHOULD HAVE THE AUTHORITY TO CREATE MONEY?**

The overriding principle when we are deciding who should have the authority to create money is whether or not the ‘creator’ can benefit personally from creating money. If the answer is yes, then we have a conflict of interest.

Banks profit from making loans, and as such they incentivise their staff to maximise lending through sales targets, bonuses, commissions, the opportunity of promotion, etc. During periods where economic conditions are relatively benign banks and bankers profit by increasing their lending and by implication increasing the money supply as fast as possible. In theory the risk-management side of banks should place some kind of limitation upon this increase in lending and consequent increase in the money supply, but history has shown that risk management and prudence is often forgotten in the chase for profits. Besides, while the percentage increase in the money supply was

# CHAPTER 8

## MAKING THE TRANSITION

This chapter explains how we make the transition between the current system and the reformed system. It is necessarily quite technical. Readers who wish to avoid the balance sheets may skip this chapter, as the following chapters assume that this process has already been completed.

### **An overview of the process**

There are two elements of the transition to the new banking system:

1. The overnight 'switchover' on a specified date when the demand deposits of banks will be converted into state-issued currency and customers' accounts will be converted into Transaction Accounts and Investment Accounts.
2. A longer period, potentially 10-30 years after the reforms, as the consequences of the conversion of demand deposits into state-issued currency allows a significant reduction in household debt and a gradual reduction in the size of the aggregated balance sheet of the banking sector.

The economy will be operating on the basis of the reformed monetary system immediately following the switchover. However, it will take a longer period of transition to recover from the 'hangover' of debt created by the current debt-based monetary system. The monetary system cannot be considered fully reformed until this process is complete.

The balance sheets for the Bank of England, the commercial banking sector and the household sector (i.e. the non-bank sector) before, just after, and around 20 years after the reforms take place are shown at the end of this chapter. An alternative accounting treatment of the reforms and these balance sheets, in which money remains on the liabilities side of the central bank's balance sheet, can be found in Appendix III.

# CHAPTER 9

## UNDERSTANDING THE IMPACTS OF THE REFORMS

This chapter looks at the economic impacts of a monetary system where money is issued solely by the state and injected into the economy through the various mechanisms outlined in Chapter 7.

We begin by briefly summarising a few key differences between the current monetary system and the reformed system. We then look at the likely impact of banks' lending and central bank money creation in a reformed system, before addressing the reform's impact on financial stability and asset price bubbles. Finally, we address the environmental and social impacts of a reformed monetary system.

### **9.1 DIFFERENCES BETWEEN THE CURRENT & REFORMED MONETARY SYSTEMS**

There are a few key differences between the current monetary system and the reformed system outlined in Chapters 7 and 8. In essence the rules of the monetary system have changed and this will change the dynamics of the economic system. The key differences are shown in the table overleaf.

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# CHAPTER 10

## IMPACTS ON THE BANKING SECTOR

### 10.1 IMPACTS ON COMMERCIAL BANKS

The reforms outlined in Chapter 6 and 7 have both advantages and disadvantages for the banking and financial sector. These effects are discussed below.

#### **Banks will need to acquire funds before lending**

As we saw in Chapter 2, currently when a bank makes a loan it creates new deposits for those who have borrowed the money. After the reform, this will no longer be the case, although banks will still be able to make loans using funds that customers have provided specifically for this purpose. Banks will no longer be able to make loans first (by making an accounting entry) and ‘go looking for the reserves later’, as they do in the current system. Instead, they will have to find the money they need to make loans before they make them. Banks will thus become true intermediaries, merely transferring pre-existing purchasing power from savers to borrowers.

It is difficult to predict how individuals will allocate their funds between Investment and Transaction Accounts after the reform. However, the current ratio of money in sight deposits (which are similar to Transaction Accounts) to time deposits (which are similar to Investment Accounts) may give us a clue. Currently the balance of time deposits to sight deposits is £1.5 trillion to £1.1 trillion (58% in time deposits vs. 42% in sight deposits).<sup>1</sup>

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1. These figures were arrived at by adding together all sight deposit categories (MFIs, public sector, private sector and non-residents – Bank of England codes: RPMB3GL, RPMB3MM, RPMB3NM, RPMB3OM) and all time deposit categories

# CONCLUSION

*“When you start printing money, you create some value for yourself. If you can issue a thousand pounds-worth of IOUs to everybody, you’ve got a thousand pounds for nothing. And so we do restrict the ability of people to create their own [bank] notes ... We’re protecting you from charlatans.”*

**PAUL FISHER<sup>1</sup>**

**Executive Director, Bank of England**

There is a curious contradiction at the heart of the contemporary monetary system. While one agency of the state – the police – spend considerable time and resources trying to prevent the private creation of paper money (commonly referred to as ‘counterfeiting’), another agency of state – the Bank of England – spends significantly more time enabling and facilitating the private creation of money by the corporations that we know as banks. Banks are able to create money because their IOUs (liabilities) can be used, via a sophisticated electronic payment system, as a substitute for the paper money issued by the state. These privately-issued IOUs now make up 97% of all the money in the UK economy.

Yet as Paul Fisher’s quote attests, the Bank of England is clearly aware that the ability to issue “a thousand pounds-worth of IOUs” gives the issuer “something for nothing”. In the last decade alone, UK banks have issued more than a trillion pounds of additional IOUs. The value that they got for “nothing” was a trillion pounds-worth of interest bearing assets in the form of debt contracts

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1. Speaking to BBC Radio 4 “Analysis – What Is Money?”, 1st April 2012.



# APPENDIX I

## EXAMPLES OF MONEY CREATION BY THE STATE: ZIMBABWE VS. PENNSYLVANIA

The common response to the idea of allowing the state to issue money and spend it into the economy is that such an approach would be highly inflationary. The examples of the hyperinflation in Zimbabwe or Weimar Republic Germany are often mentioned as a reason why states cannot be trusted to issue currency. However, those making these claims rarely have any in-depth understanding of what happened in Zimbabwe, Germany or any of the other hyperinflationary periods. In reality, each period of hyperinflation happens due to a unique set of circumstances that are completely inapplicable to the UK or any of the countries where these reforms are likely to be implemented.

In this appendix we look first at the Zimbabwean experience between 2007 and 2008, as this is the most recent example of a hyperinflation. We also briefly look at the period of hyperinflation in Weimar Republic Germany.

We then look at a Pennsylvanian money system in the 1720s, to show that if managed properly, money creation can lead to a prosperous and low inflation economy. Unfortunately there are few contemporary examples of responsible state-issued currency; every country world-wide runs on some variant of the banking system outlined in Chapter 2, and as a result has suffered significant inflation and indebtedness (whether at a household or government level, or both). In many cases, countries under the current system can only attempt to keep inflation low by raising interest rates, which can stifle beneficial investment (Chang, 2007). Under the proposals outlined in this book, it would be much more straightforward to maintain inflation at a reasonable level without the need to use high investment-stifling interest rates.

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# APPENDIX II

## REDUCING THE NATIONAL DEBT

As discussed in Chapter 7, one potential use of newly created money could be to pay down the existing national (government) debt. In this appendix we explain the basic concepts necessary to understand the national debt. We then discuss the reasons why in the context of these reforms, paying down the national debt is not the top priority.

### **What is the national debt?**

The government has three main sources of revenue:

1. Taxes & fees - such as Income Tax, National Insurance, Value Added Tax (VAT), taxes on alcohol, fuel, air tickets and so on.
2. Borrowing - this is mainly achieved through the issuing of bonds.
3. Creation of money - the revenue from this source is miniscule under the current monetary system.

If government spends more than it collects in taxes the difference is called the 'deficit'. If it collects more in taxes than it spends, this difference is called a 'surplus'. Surpluses have been relatively rare in the UK in recent decades, with the government typically running deficits, spending more than they collect in taxes and borrowing to make up the difference. These deficits have increased the nominal value of the national debt (whereas surpluses would have reduced it).

### **Who does the government borrow from?**

Rather than borrowing from banks, the government typically borrows from the 'market' - primarily pension funds and insurance companies. These companies lend money to the government by buying the bonds that the government issues for this purpose. Many companies favour investing money

# APPENDIX III

## ACCOUNTING FOR THE MONEY CREATION PROCESS

The reforms outlined in this book modernise the process by which money creation is accounted for at the Bank of England and the Treasury.

Instead of treating money as a liability of the issuer (as is the current setup for bank notes), we treat money as a token, issued by the state. This money is accepted and used by people and businesses because they are confident they can exchange these tokens with other people for goods or services of equivalent value. In general, if too many of these tokens are issued, their value will fall, in terms of the amount of goods or services they can buy. This is inflation. Conversely, if insufficient tokens are issued, their value will rise – this is deflation.

### **The current ‘backing’ for bank notes**

The concept of ‘backing’ the currency is a hangover from the days when pound sterling bank notes were in effect receipts for gold held at the Bank of England. Bank notes have not been backed by or redeemable for gold since 1931, and despite the phrase “I promise to pay the bearer on demand the sum of £10” on a ten pound sterling bank note, if you return this note to the Bank of England, you will be given not gold, but an identical note of equal value. The Bank of England’s own website is quite clear about this:

“The words ‘I promise to pay the bearer on demand the sum of five [ten/ twenty/fifty] pounds’ date from long ago when our notes represented deposits of gold. At that time, a member of the public could exchange one of our banknotes for gold to the same value. For example, a £5 note could be exchanged for five gold coins, called sovereigns. But the value of the pound has not been linked to gold for many years, so the meaning of the

## ABOUT THE AUTHORS

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*"The essence of the contemporary monetary system is the creation of money, out of nothing, by private banks' often foolish lending."*

**MARTIN WOLF**  
**Chief Economics Commentator, Financial Times**

At the heart of the ongoing economic crisis is the fact that governments across the world have given the power to create money to the private corporations that we know as banks. Today, over 97% of all of the money used by people and businesses is created by banks when they make loans. This way of creating money has led to economic instability and a financial crisis. It has produced the highest-ever levels of personal and government debt, made houses unaffordable, and driven the short-termism which is destroying the businesses and ecosystems on which we depend.

But it doesn't have to be like this. The way money is created can be changed. *Modernising Money* shows how a UK law implemented in 1844 can be updated and combined with reform proposals from the Great Depression, to provide the UK with a stable monetary and banking system, much lower levels of personal and national debt, and a thriving economy.

Detailed, but accessible to non-economists, *Modernising Money* is written for anybody who wants to know how to create an economy that serves people, businesses, society and the environment.

"This 'must read, must act' book lucidly explains two things: the urgent need for a simple basic reform of the money system to make it work more efficiently and fairly for all, and an accessible way for responsible citizens to help make the reform happen."

**James Robertson**, author of *Future Money: Breakdown or Breakthrough?*

"*Modernising Money* unveils how the present money system really works, why it doesn't work well, and how it ought to work to the benefit of all."

**Prof. Joseph Huber**, Professor of Economics & Environmental Sciences, Martin Luther University, Halle-Wittenberg

