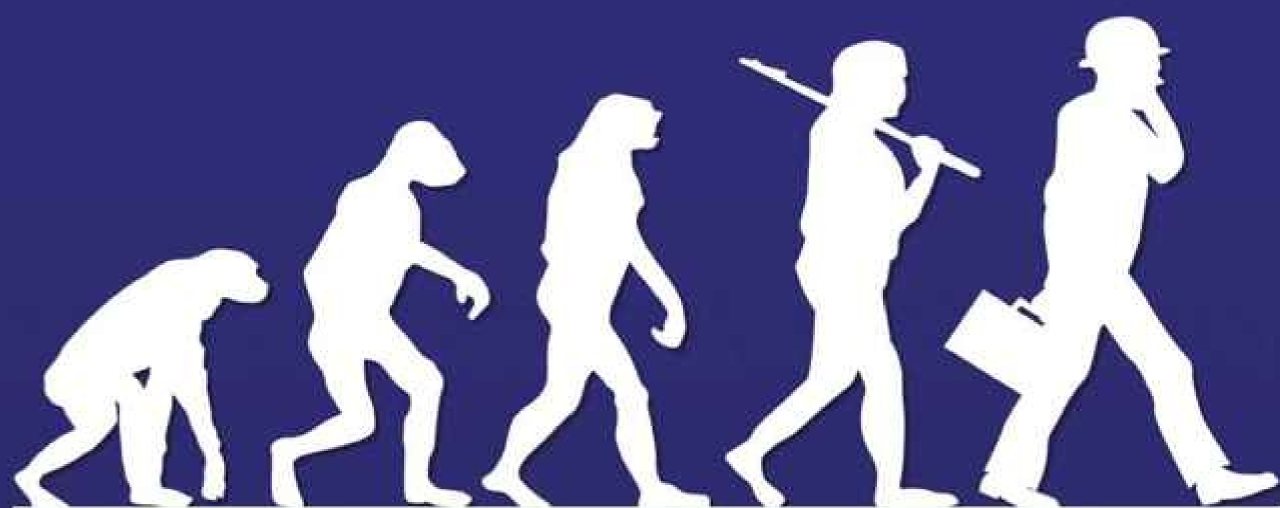
ANDREW JACKSON & BEN DYSON



MODERNISING MONEY

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

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

Table of Contents

Acknowledgements
A note for readers outside the UK
Foreword
Summary of Key Points
INTRODUCTION
- The structure of this book

A SHORT HISTORY OF MONEY
- 1.1 The origins of money
  - A textbook history
  - The historical reality
- 1.2 The emergence of banking

THE CURRENT MONETARY SYSTEM
- 2.1 Commercial (high-street) banks
  - The Bank of England
- 2.2 The business model of banking
  - Understanding balance sheets
  - Staying in business
- 2.3 Money creation
  - Creating money by making loans to customers
- 2.4 Other functions of banking
  - Making electronic payments between customers
- 2.5 Money destruction
- 2.6 Liquidity and central bank reserves
  - How central bank reserves are created
  - How commercial banks acquire central bank reserves
- 2.7 Money creation across the whole banking system
  - The money multiplier model
  - Endogenous money theory

WHAT DETERMINES THE MONEY SUPPLY?
- 3.1 The demand for credit
  - Borrowing due to insufficient wealth
  - Borrowing for speculative reasons
  - Borrowing due to legal incentives
- 3.2 The demand for money
  - Conclusion: the demand for money & credit
- 3.3 Factors affecting banks' lending decisions
  - The drive to maximise profit

Government guarantees & ‘too big to fail’
Externalities and competition
3.4 Factors limiting the creation of money
Capital requirements (the Basel Accords)
Reserve ratios & limiting the supply of central bank reserves
Controlling money creation through interest rates
Unused regulations
3.5 So what determines the money supply?
Credit rationing
So how much money has been created by banks?
ECONOMIC CONSEQUENCES OF THE CURRENT SYSTEM
4.1 Economic effects of credit creation
Werner’s Quantity Theory of Credit
How asset price inflation fuels consumer price inflation
4.2 Financial instability and ‘boom & bust’
Minsky’s Financial Instability Hypothesis
The bursting of the bubble
4.3 Evidence
Financial crises
Normal recessions
4.4 Other economic distortions due to the current banking system
Problems with deposit insurance & underwriting banks
Subsidising banks
Distortions caused by the Basel Capital Accords
SOCIAL AND ENVIRONMENTAL IMPACTS OF THE CURRENT MONETARY SYSTEM
5.1 Inequality
5.2 Private debt
5.3 Public debt, higher taxes & fewer public services
5.4 Environmental impacts
Government responses to the boom bust cycle
Funding businesses
Forced growth
5.5 The monetary system and democracy
Use of ‘our’ money
The misconceptions around banking
The power to shape the economy
Dependency
Confusing the benefits and costs of banking
PREVENTING BANKS FROM CREATING MONEY

6.1 An overview
6.2 Current/Transaction Accounts and the payments system
6.3 Investment Accounts
6.4 Accounts at the Bank of England
The relationship between Transaction Accounts and a bank's Customer Funds Account
6.5 Post Reform Balance Sheets for Banks and the Bank of England
Commercial banks
Central bank
Measuring the money supply
6.6 Making payments
1. Customers at the same bank
2. Customers at different banks
A note on settlement in the reformed system
6.7 Making loans
Loan repayments
6.8 How to realign risk in banking
Investment Account Guarantees
The regulator may forbid specific guarantees
6.9 Letting banks fail
THE NEW PROCESS FOR CREATING MONEY
7.1 Who should have the authority to create money?
7.2 Deciding how much money to create: The Money Creation Committee (MCC)
How the Money Creation Committee would work
Is it possible for the Money Creation Committee to determine the 'correct' money supply?
7.3 Accounting for money creation
7.4 The mechanics of creating new money
7.5 Spending new money into circulation
Weighing up the options
7.6 Lending money into circulation to ensure adequate credit for businesses
7.7 Reducing the money supply
MAKING THE TRANSITION
An overview of the process
8.1 The overnight 'switchover' to the new system
Step 1: Updating the Bank of England's balance sheet
Step 2: Converting the liabilities of banks into electronic state-issued money

Step 3: The creation of the 'Conversion Liability' from banks to the Bank of England
8.2 Ensuring banks will be able to provide adequate credit immediately after the switchover
Funds from customers
Lending the money created through quantitative easing
Providing funds to the banks via auctions
8.3 The longer-term transition
Repayment of the Conversion Liability
Allowing deleveraging by reducing household debt
Forcing a deleveraging of the household sector
UNDERSTANDING THE IMPACTS OF THE REFORMS
9.1 Differences between the current & reformed monetary systems
9.2 Effects of newly created money on inflation and output
9.3 Effects of lending pre-existing money via Investment Accounts
Lending pre-existing money for productive purposes
Lending pre-existing money for house purchases and unproductive purposes
Lending pre-existing money for consumer spending
9.4 Limitations in predicting the effects on inflation and output
9.5 Possible financial instability in a reformed system
A reduced possibility of asset price bubbles
Central bank intervention in asset bubbles
When an asset bubble bursts
9.6 Debt
9.7 Inequality
9.8 Environment
9.9 Democracy
IMPACTS ON THE BANKING SECTOR
10.1 Impacts on commercial banks
Banks will need to acquire funds before lending
The impact on the availability of lending
Banks will be allowed to fail
The 'too big to fail' subsidy is removed
The need for debt is reduced, shrinking the banking sector's balance sheet
Basel Capital Adequacy Ratios could be simplified
Easier for banks to manage cashflow and liquidity
Reducing the 'liquidity gap'
10.2 Impacts on the central bank

Direct control of money supply
No need to manipulate interest rates
A slimmed down operation at the Bank of England
10.3 Impacts on the UK in an international context
The UK as a safe haven for money
Pound sterling would hold its value better than other currencies
No implications for international currency exchange
Would speculators attack the currency before the changeover?
10.4 Impacts on the payment system
National security
Opening the door to competition among Transaction Account providers
CONCLUSION
APPENDIX I: EXAMPLES OF MONEY CREATION BY THE STATE:ZIMBABWE VS. PENNSYLVANIA
Zimbabwe
Other hyperinflation
Pennsylvania
Conclusions from historical examples
APPENDIX II: REDUCING THE NATIONAL DEBT
What is the national debt?
Who does the government borrow money from?
Does government borrowing create new money?
Is it possible to reduce the national debt?
Is it desirable to reduce the national debt?
Paying down the national debt in a reformed monetary system
Is this 'monetising' the national debt?
APPENDIX III: ACCOUNTING FOR THE MONEY CREATION PROCESS
The current 'backing' for bank notes
The process for issuing coins in the USA
The key differences between US coins and UK notes
The post-reform process for issuing electronic money
Ensuring that electronic money cannot be forged
Reclaiming the seigniorage on notes & electronic money
Modernising the note issuance
An alternative accounting treatment
Balance sheets: alternative treatment (with money as a liablity of the Bank of England)
BIBLIOGRAPHY

About the Authors

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Positive Money
205 Davina House
137-149 Goswell Road
London EC1V 7ET

Tel: +44 (0) 207 253 3235

www.positivemoney.org

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remain entirely the responsibility of the authors.

A NOTE FOR READERS OUTSIDE THE UK

Although this book is written with the UK banking system in mind, the analysis is equally applicable to the banking and monetary system of any modern economy. While there are minor differences in rules and regulations between countries, almost all economies today are based on a monetary system that is fundamentally the same as that of the UK.

Equally, the reforms proposed here can be applied to any country that has its own currency, or any currency bloc, with only minor tailoring to the unique situation of each country.

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.

PROFESSOR HERMAN DALY
Professor Emeritus
School of Public Policy
University of Maryland

Former Senior Economist
at the World Bank

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: Money & Banking Today

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.

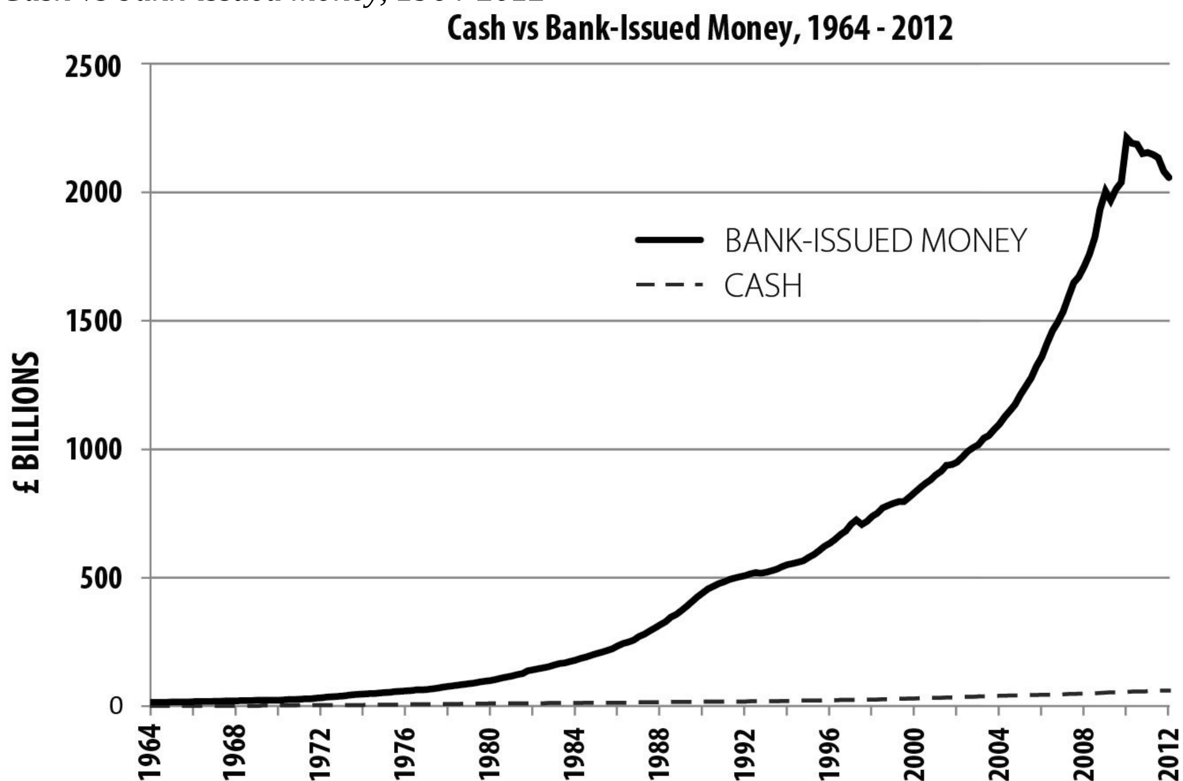
When banks feel confident and are willing to lend, new money is created. Banks profit from the interest they charge on loans, and therefore incentivise their staff to make loans (and create money) through bonuses, commissions and other incentive schemes. These loans tend to be disproportionately allocated 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.

The structure of this book

Part 1: The Current Monetary System

Chapter 1 provides a brief history of money and banking and describes the emergence of the monetary system we have today.

Chapter 2 describes how the current monetary system works and how commercial banks are able to create the nation's money supply.

Chapter 3 considers the wide range of influences that affect that amount of money that the banks create.

Chapter 4 analyses the economic effects of the current monetary system.

Chapter 5 looks at the social and ecological impacts of the current monetary system.

Part 2: The Reformed Monetary System

Chapter 6 describes the changes that must be made to the operations of banks in order to remove their ability to create money.

Chapter 7 describes how new money will instead be created by a public body, and how that money will be put into the economy.

Chapter 8 outlines the transition between the current system and reformed system (with further technical details provided in Appendix III).

Chapter 9 covers the likely social, economic and environmental impacts of a

monetary system where money is issued solely by the state, without a corresponding debt.

Chapter 10 considers the likely impact of these reforms on the banking and financial sector.