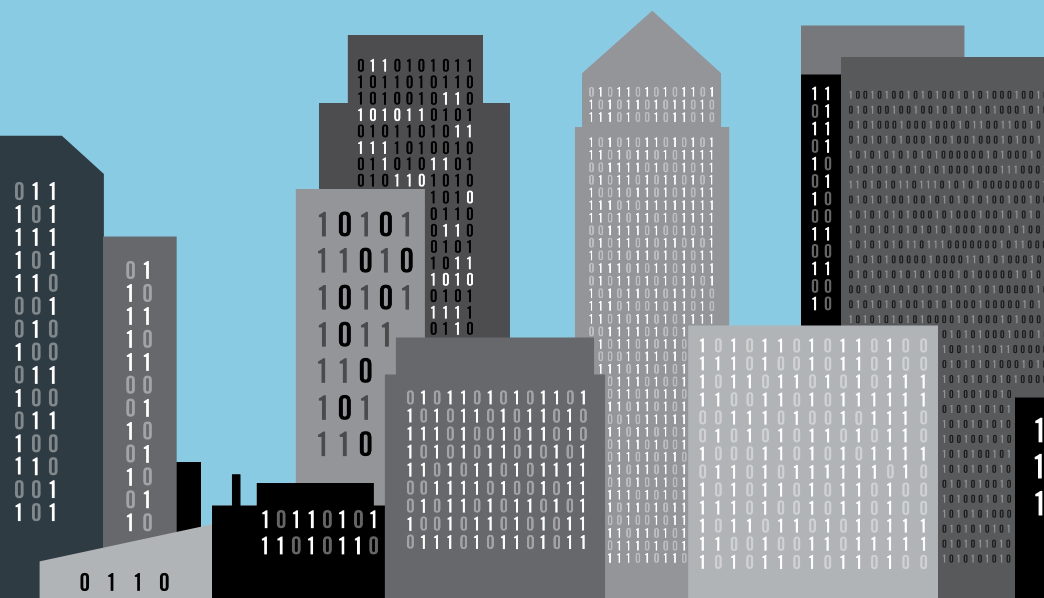
JOSH RYAN-COLLINS, TONY GREENHAM, RICHARD WERNER, ANDREW JACKSON
FOREWORD BY CHARLES A.E. GOODHART

WHERE DOES MONEY COME FROM?

A GUIDE TO THE UK MONETARY AND BANKING SYSTEM



"...A CLEAR PATH THROUGH THE COMPLEX THICKETS OF MISUNDERSTANDINGS OF THIS IMPORTANT ISSUE"
PROFESSOR CHARLES A.E. GOODHART

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Where Does Money Come From?
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Foreword

Far from money being 'the root of all evil', our economic system cannot cope without it. Hence the shock-horror when the Lehman failure raised the spectre of an implosion of our banking system. It is far nearer the truth to claim that 'Evil is the root of all money', a witty phrase coined by Nobu Kiyotaki and John Moore.

If we all always paid our bills in full with absolute certainty, then everyone could buy anything on his/her own credit, by issuing an IOU on him/herself. Since that happy state of affairs is impossible, (though assumed to their detriment in most standard macro-models), we use – as money – the short-term ('sight') claim on the most reliable (powerful) debtor. Initially, of course, this powerful debtor was the Government; note how the value of State money collapses when the sovereign power is overthrown. Coins are rarely full-bodied and even then need guaranteeing by the stamp of the ruler seigniorage. However, there were severe disadvantages in relying solely on the Government to provide sufficient money for everyone to use; perhaps most importantly, people could not generally borrow from the Government. So, over time, we turned to a set of financial intermediaries: the banks, to provide us both with an essential source of credit and a reliable, generally safe and acceptable monetary asset.

Such deposit money was reliable and safe because all depositors reckoned that they could always exchange their sight deposits with banks on demand into legal tender. This depended on the banks themselves having full access to legal tender, and again, over time, central banks came to have monopoly control over such base money. So, the early analysis of the supply of money focused on the relationship between the supply of base money created by the central bank and the provision by commercial banks of both bank credit and bank deposits: the bank multiplier analysis.

In practice however, the central bank has always sought to control the level of interest rates, rather than the monetary base. Hence, as Richard Werner and his co-authors Josh Ryan-Collins, Tony Greenham and Andrew Jackson document so clearly in this book, the supply of money is actually determined primarily by the demand of borrowers to take out bank loans. Moreover, when such demand is low, because the economy is weak and hence interest rates are also driven down to zero, the relationship between available bank reserves (deposits at the central bank) and commercial bank lending/deposits can break down entirely. Flooding banks with additional liquidity, as central banks have done recently via Quantitative Easing (QE), has not led to much commensurate increase in bank lending or broad money.

All this is set out in nice detail in this book, which will provide the reader with a clear path through the complex thickets of misunderstandings of this important issue. In addition the authors provide many further insights into current practices of money and banking. At a time when we face up to massive challenges in financial reform and regulation, it is essential to have a proper, good understanding of how the monetary system works, in order to reach better alternatives. This book is an excellent guide and will be suitable for a wide range of audiences, including not only those new to the field, but also to policy-makers and academics.

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19 September 2011

1

INTRODUCTION

I'm afraid that the ordinary citizen will not like to be told that the banks or the Bank of England can create and destroy money.
Reginald McKenna, ex-Chancellor of the Exchequer, 1928[1]

I feel like someone who has been forcing his way through a confused jungle … But although my field of study is one which is being lectured upon in every University in the world, there exists, extraordinarily enough, no printed Treatise in any language – so far as I am aware – which deals systematically and thoroughly with the theory and facts of representative money as it exists in the modern world.
John Maynard Keynes, 1930[2]

The importance of money and banking to the modern economy has increasingly come under the global spotlight since the North Atlantic financial crisis of 2008. Yet there remains widespread misunderstanding of how new money is created, both amongst the general public and many economists, bankers, financial journalists and policymakers.

This is a problem for two main reasons. First, in the absence of a shared and accurate understanding, attempts at banking reform are more likely to fail. Secondly, the creation of new money and the allocation of purchasing power are a vital economic function and highly profitable. This is therefore a matter of significant public interest and not an obscure technocratic debate. Greater clarity and transparency about this key issue could improve both the democratic legitimacy of the banking system, our economic prospects and, perhaps even more importantly, improve the chances of preventing future crises.

By keeping explanations simple, using non-technical language and clear diagrams, *Where Does Money Come From?* reveals how it is possible to describe the role of money and banking in simpler terms than has generally been the case. The focus of our efforts is a factual, objective review of how the system works in the United Kingdom, but it would be brave indeed of us to claim this as the complete and definitive account. Reaching a good understanding requires us to interpret the nature and history of money and banking, as set out in Chapter 3, both of which contain subjective elements by their very nature.

Drawing on research and consultation with experts, including staff from the Bank of England and ex-commercial bank staff, we forge a comprehensive and accurate conception of money and banking through careful and precise analysis. We demonstrate throughout *Where Does Money Come From?* how our account represents the best fit with the empirical observations of the workings of the system as it operates in the UK today.

1.1. Key questions

The financial crisis of 2008 raised many more questions about our national system of banking and money than it answered. Along with questions around the crisis itself – Why did it happen? How can we prevent it happening again? – there has been broad basic questioning of the nature of banks and money including:

- Where did all that money come from? – in reference to the ‘credit bubble’ that led up to the crisis.
- Where did all that money go? – in reference to the ‘credit crunch’.
- How can the Bank of England create £375 billion of new money through ‘quantitative easing’? And why has the injection of such a significant sum of money not helped the economy recover more quickly?
- Surely there are cheaper and more efficient ways to manage a banking crisis than to burden taxpayers and precipitate cutbacks in public expenditure?

These questions are very important. They allude to a bigger question which is the main subject of this book: 'How is money created and allocated in the UK?' This seems like a question that should have a simple answer, but clear and easily accessible answers are hard to find in the public domain.

1.2. Overview of key findings

1.2.1. The money supply and how it is created

Defining money is surprisingly difficult. In *Where Does Money Come From?* we cut through the tangled historical and theoretical debate to identify that anything widely accepted as payment, particularly by the Government as payment of tax, is money. This includes bank credit because although an IOU from a friend is not acceptable at the tax office or in the local shop, an IOU from a bank most definitely is.

New money is principally created by commercial banks when they extend or create credit, either through making loans, including overdrafts, or buying existing assets. In creating credit, banks simultaneously create brand new deposits in our bank accounts, which, to all intents and purposes, is money. This basic analysis is neither radical nor new. In fact, central banks around the world support the same description of where new money comes from – albeit usually in their less prominent publications.

We identify that the UK's national currency exists in three main forms, of which the second two exist in electronic form:

1. **Cash** – banknotes and coins.
2. **Central bank reserves** – reserves held by commercial banks at the Bank of England.
3. **Commercial bank money** – bank deposits created mainly either when commercial banks create credit as loans, overdrafts or for purchasing assets.

Only the Bank of England or the Government can create the first two forms of money, which is referred to in this book as 'central bank money' or 'base money'. Since central bank reserves do not actually circulate in the economy, we can further narrow down the money supply that is actually circulating as consisting of cash and commercial bank money.

Physical cash accounts for less than 3 per cent of the total stock of circulating money in the economy. Commercial bank money – credit and coexistent deposits – makes up the remaining 97 per cent.

1.2.2. Popular misconceptions of banking

There are several conflicting ways to describe what banks do. The simplest version is that banks take in money from savers and lend this money out to borrowers. However, this is not actually how the process works. Banks do not need to wait for a customer to deposit money before they can make a new loan to someone else. In fact, it is exactly the opposite: the making of a loan creates a new deposit in the borrower's account.

More sophisticated versions bring in the concept of 'fractional reserve banking'. This description recognises that the banking system can lend out amounts that are many times greater than the cash and reserves held at the Bank of England. This is a more accurate picture, but it is still incomplete and misleading, since each bank is still considered a mere 'financial intermediary' passing on deposits as loans. It also implies a strong link between the amount of money that banks create and the amount held at the central bank. In this version it is also commonly assumed that the central bank has significant control over the amount of reserves that banks hold with it.

In fact, the ability of banks to create new money is only very weakly linked to the amount of reserves they hold at the central bank. At the time of the financial crisis, for example, banks held just £1.25 in reserves for every £100 issued as credit. Banks operate within an electronic clearing system that nets out multilateral payments at the end of each day, requiring them to hold only a tiny proportion of central bank money to meet their payment requirements.

Furthermore, we argue that rather than the central bank controlling the amount of credit that commercial banks can issue, it is the commercial banks that determine the quantity of central bank reserves that the Bank of England must lend to them to be sure of keeping the system functioning.

1.2.3. Implications of commercial bank money creation

The power of commercial banks to create new money has many important implications for economic prosperity and financial stability. We highlight four that are relevant to proposals to reform the banking system:

1. Although possibly useful in other ways, capital adequacy requirements have not and do not constrain money creation and therefore do not necessarily serve to restrict the expansion of banks' balance sheets in aggregate. In other words, they are mainly ineffective in preventing credit booms and their associated asset price bubbles.
2. In a world of imperfect information, credit is rationed by banks and the primary determinant of how much they lend is not interest rates, but confidence that the loan will be repaid and confidence in the liquidity and

solvency of other banks and the system as a whole.

3. Banks decide where to allocate credit in the economy. The incentives that they face often lead them to favour lending against collateral, or existing assets, rather than lending for investment in production. As a result, new money is often more likely to be channelled into property and financial speculation than to small businesses and manufacturing, with associated profound economic consequences for society.
4. Fiscal policy does not in itself result in an expansion of the money supply. Indeed, in practice the Government has no direct involvement in the money creation and allocation process. This is little known but has an important impact on the effectiveness of fiscal policy and the role of the Government in the economy.

1.3. How the book is structured

Where Does Money Come From? is divided into seven chapters. Chapter 2 reviews the popular conception of banks as financial intermediaries and custodians, examines and critiques the textbook 'money multiplier' model of credit creation and then provides a more accurate description of the money creation process.

Chapter 3 examines what we mean by 'money'. Without a proper understanding of money, we cannot attempt to understand banking. We criticise the view, often presented in mainstream economics, that money is a commodity and show instead that money is a social relationship of credit and debt. The latter half of the chapter reviews the emergence of modern credit money in the UK, from fractional reserve banking, bond-issuance, creation of the central bank, the Gold Standard and deregulation to the emergence of digital money in the late twentieth century.

Chapter 4 outlines in simple steps how today's monetary system operates. We define modern money through the notion of purchasing power and liquidity and then set out how the payment system works: the role of central bank reserves, interbank settlement and clearing, cash, deposit insurance and the role of the central bank in influencing the money supply through monetary policy. This chapter includes a section on the recent adoption, by the Bank of England and other central banks, of 'Quantitative Easing' as an additional policy tool. We also examine the concepts of bank 'solvency' and 'capital' and examine how a commercial bank's balance sheet is structured.

Chapter 5 examines the extent to which commercial bank money is effectively regulated. We analyse how the Bank of England attempts to conduct monetary policy through interventions in the money markets designed to move the price of money (the interest rate) and through its direct dealings with banks. This section also includes a review of the financial crisis and how neither liquidity nor capital adequacy regulatory frameworks were effective in preventing asset bubbles and ultimately the crisis itself. Building on the theoretical analysis in Chapter 3, we

examine examples, including international examples, of more direct intervention in credit markets.

Chapter 6 considers the role of government spending, borrowing and taxation, collectively referred to as fiscal policy, alongside international dimensions of the monetary system, including the constraints on money creation imposed by the European Union and how foreign exchange affects the monetary system. More detail is provided in Appendix 3.

Finally, the conclusion in Chapter 7 summarises the arguments and sets out a range of questions which seek to explore how reform of the current money and banking system might look. The authors summarise some alternative approaches which have been discussed in the book and provide references for further research.

Our intention in publishing *Where Does Money Come From?* is to facilitate improved understanding of how money and banking works in today's economy, stimulating further analysis and debate around how policy and decision makers can create a monetary system which supports a more stable and productive economy.

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